

MANUFACTURERS' RECORD

A
WEEKLY SOUTHERN INDUSTRIAL
RAILROAD & FINANCIAL NEWSPAPER.

TRADE GRAVITATING SOUTHWARD.

The nation, as a whole, is making an increased use of its Southern gateways to the ocean. The South (including in that term all the old slave States), while it has contributed its proportion to swelling the bulk of our increased exports, has no such share in the increase as would be inferred from those figures. This is abundantly verified when we find that of the total increase of \$101,000,000 claimed for Southern ports, \$82,134,776 was from the cities of Galveston, New Orleans and Baltimore. Baltimore has become more and more an outlet for the products of the Middle West. By the construction of several north and south lines of railroad west of Missouri, Kansas, Nebraska and States west of these have been given routes to tidewater at Galveston from 600 to 800 miles shorter than via New York. That port now also divides with New Orleans the Pacific coast traffic controlled by the Southern Pacific Railroad. Into New Orleans are poured increasing millions in tonnage from all the immense Northwestern area tributary to the Mississippi river, to the Illinois Central system and to various other railways.—St. Paul Pioneer Press.

The growth of the export trade through Southern ports is attracting attention in the East. After an elaborate review of the changes the Philadelphia Record philosophically remarks: "The southerly drift of the export trade in wheat and corn is something more serious than the result of discrimination by the railroad companies in favor of Southern ports. It is due to natural advantages. It is doubtful if the establishment of a ship canal from the lakes to the seaboard would serve to recover to Northern ports a preponderance which is no longer made secure by a superiority of facility. Trade follows the line of least resistance. It gravitates southward." If the South would invite capital instead of repelling it; if it would plant its public policy, State and national, on sound, economical grounds, ten years would transform the country.—Louisville (Ky.) Post.

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Baltimore, October 1, 1897.

The Westinghouse Air-Brake Company

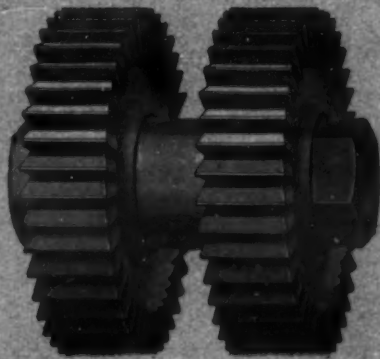
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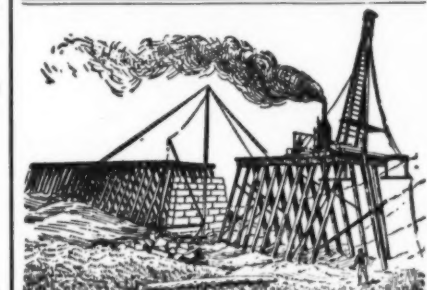
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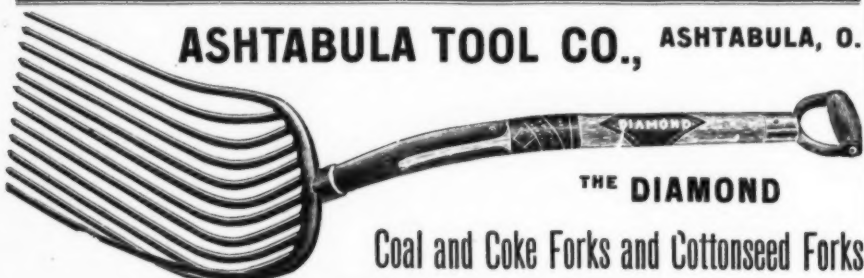
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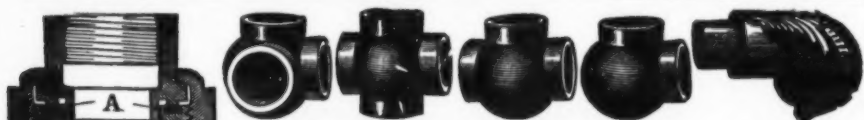


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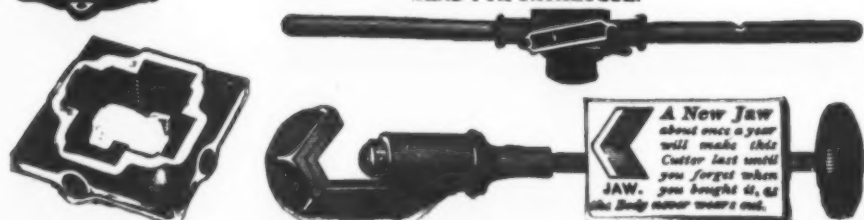
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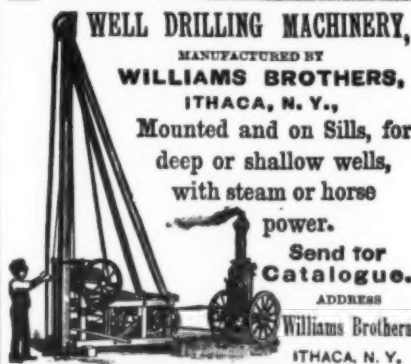
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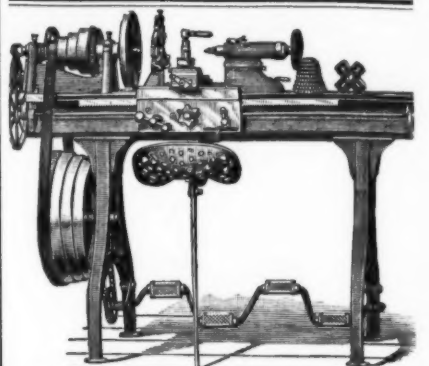
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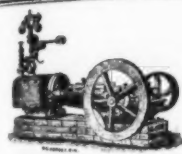
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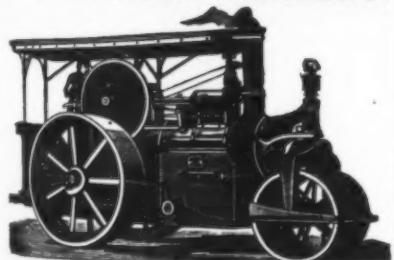
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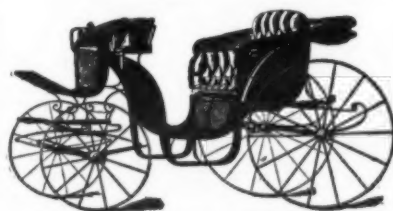
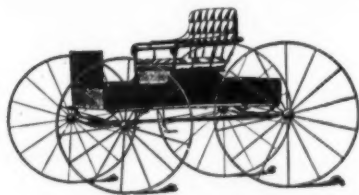
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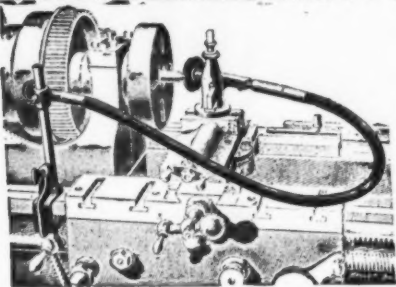
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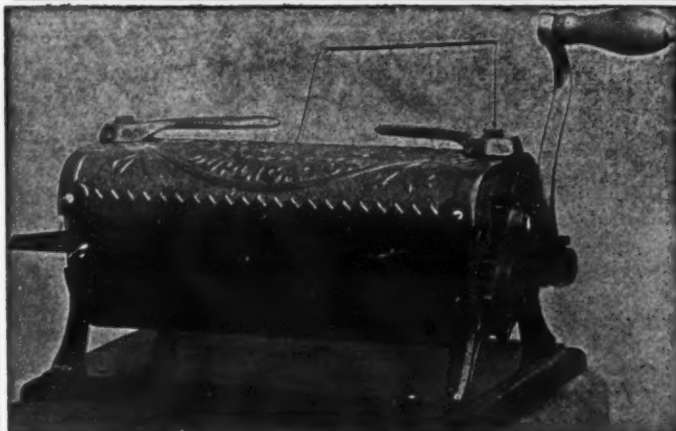
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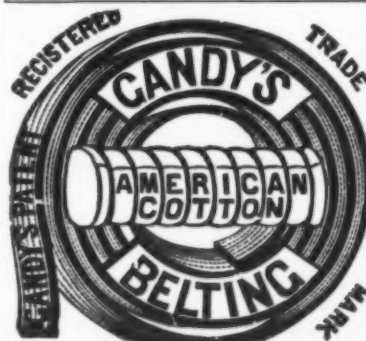
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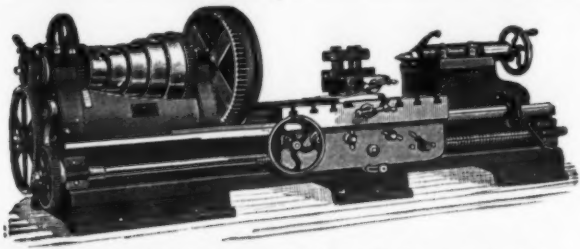
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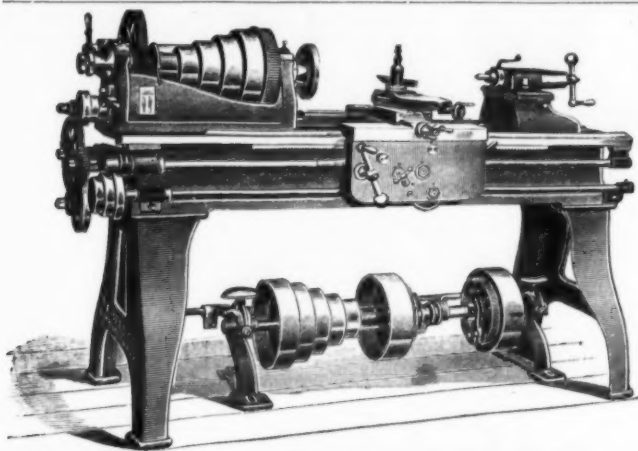
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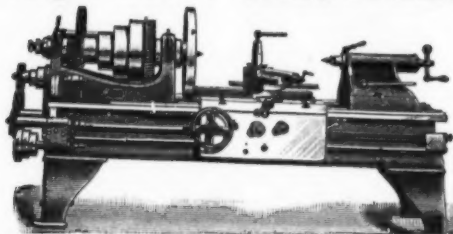
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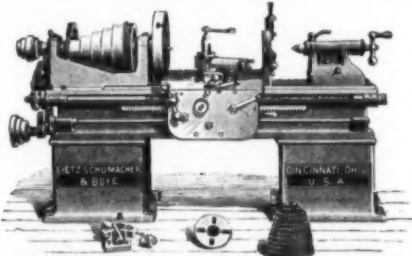
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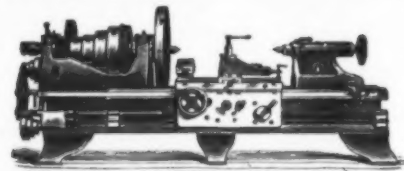
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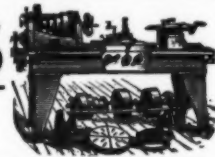
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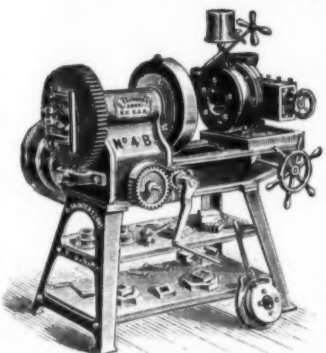
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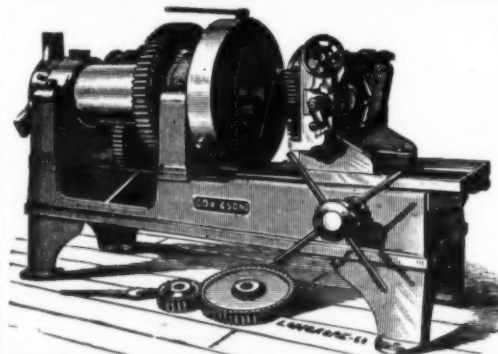
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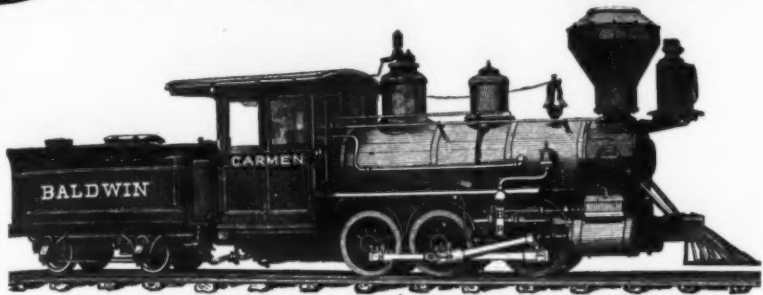
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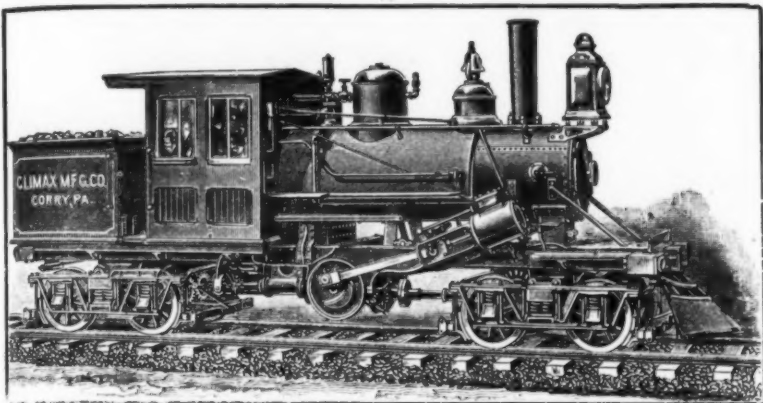
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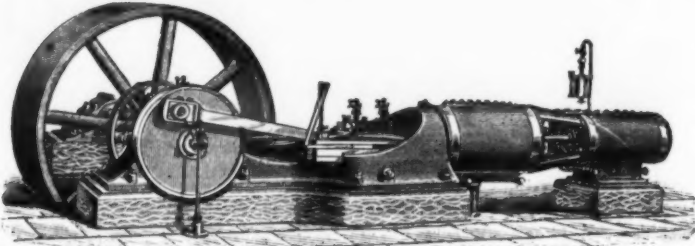
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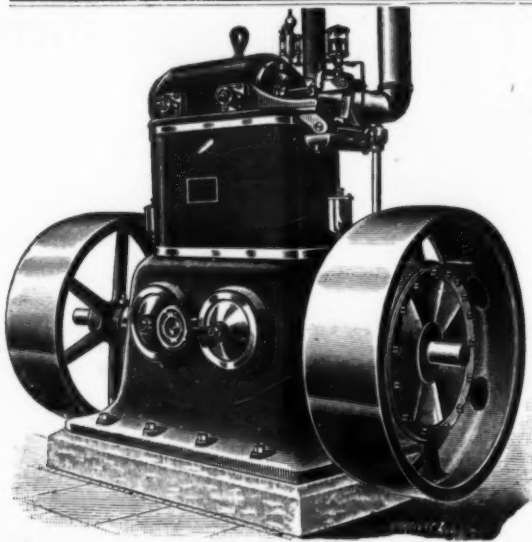


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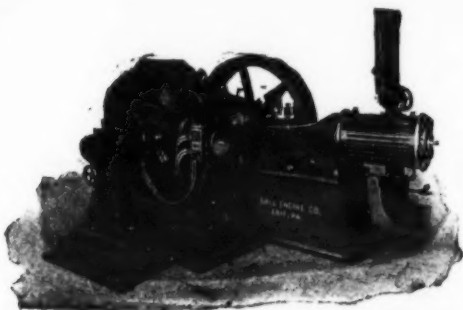
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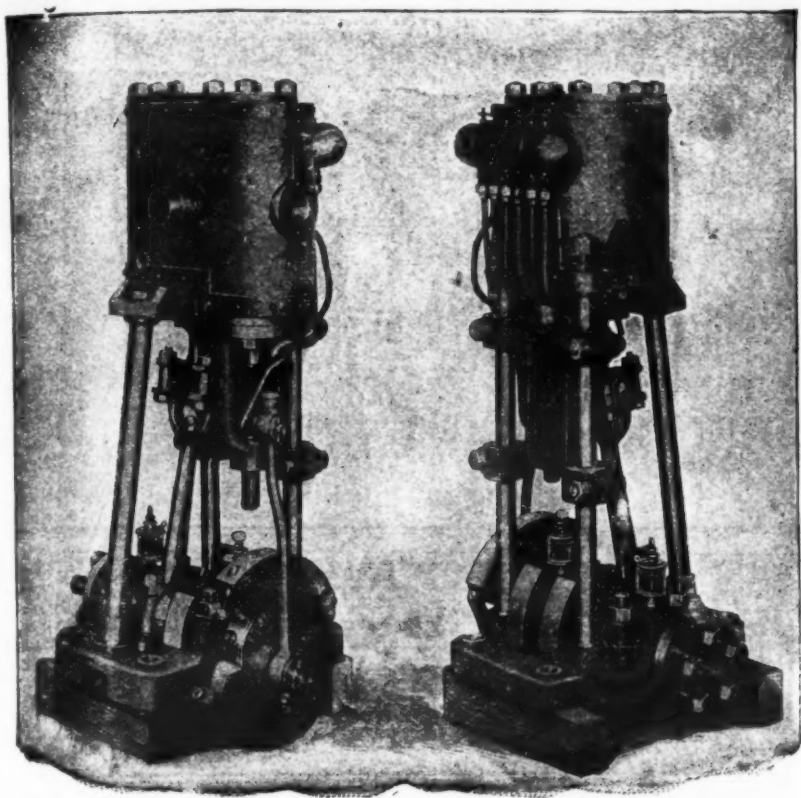
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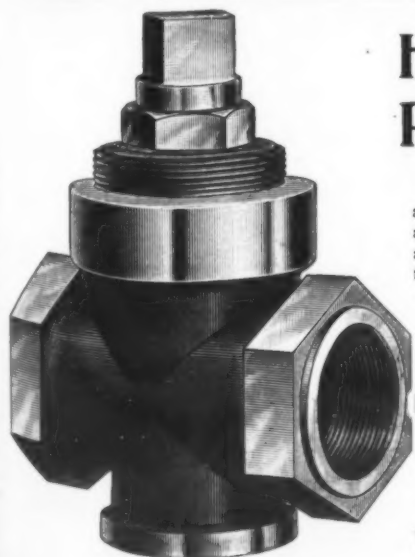
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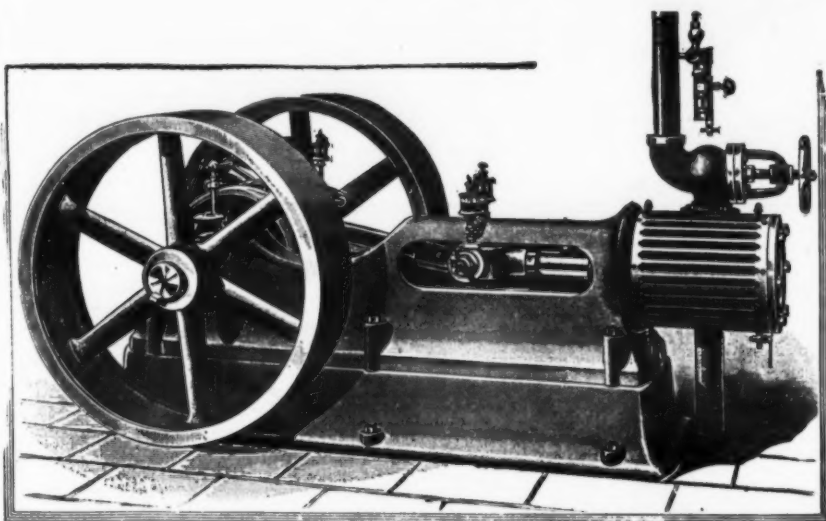
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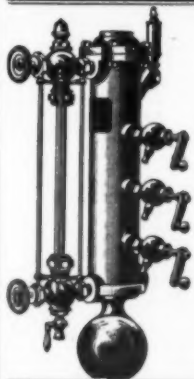
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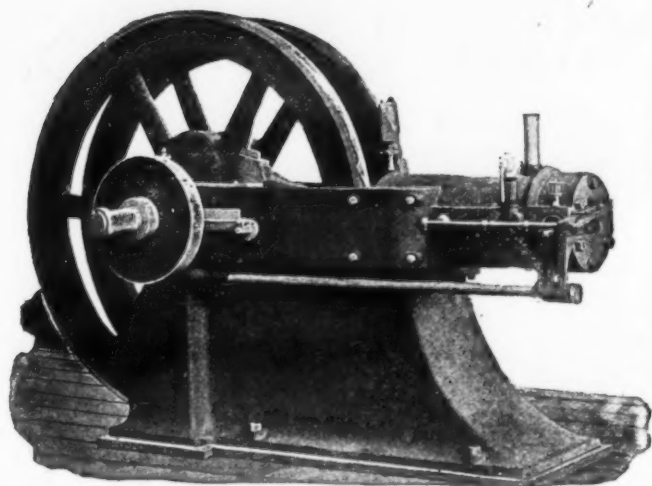
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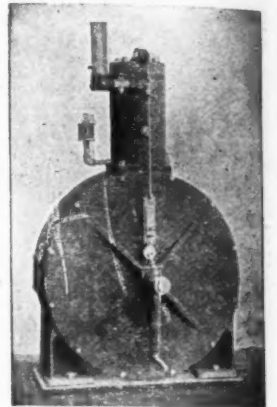
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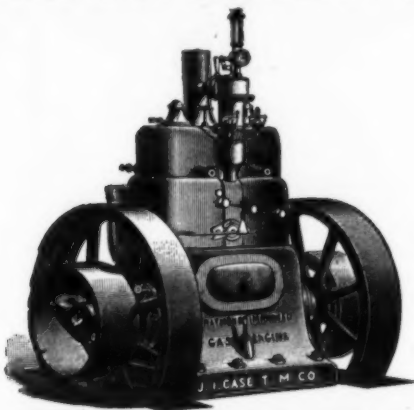
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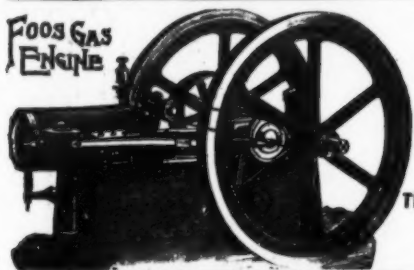
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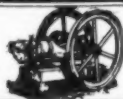
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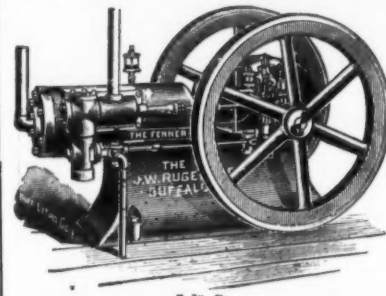
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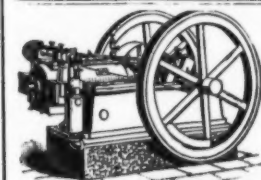
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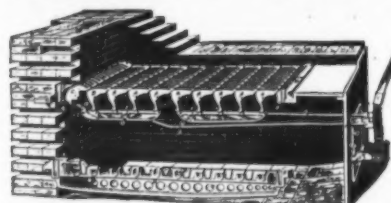
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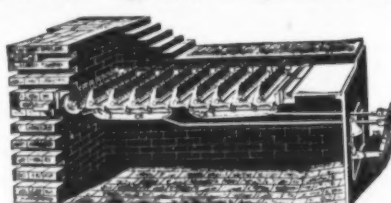
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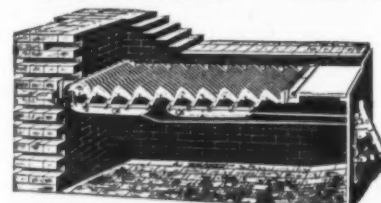
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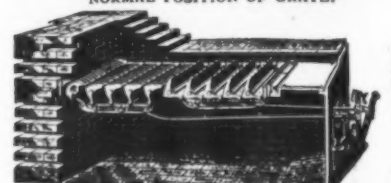
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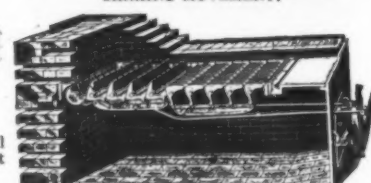
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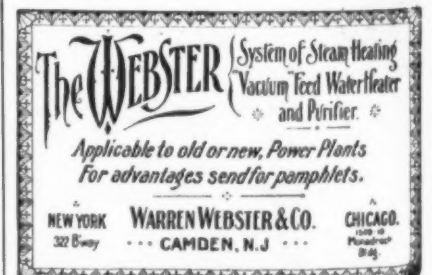
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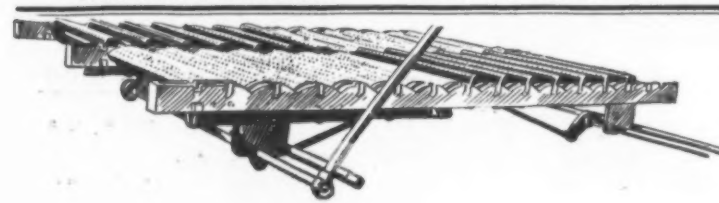
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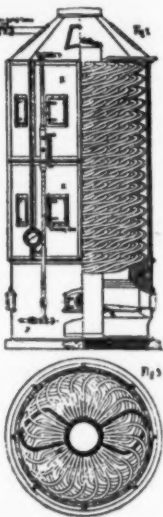
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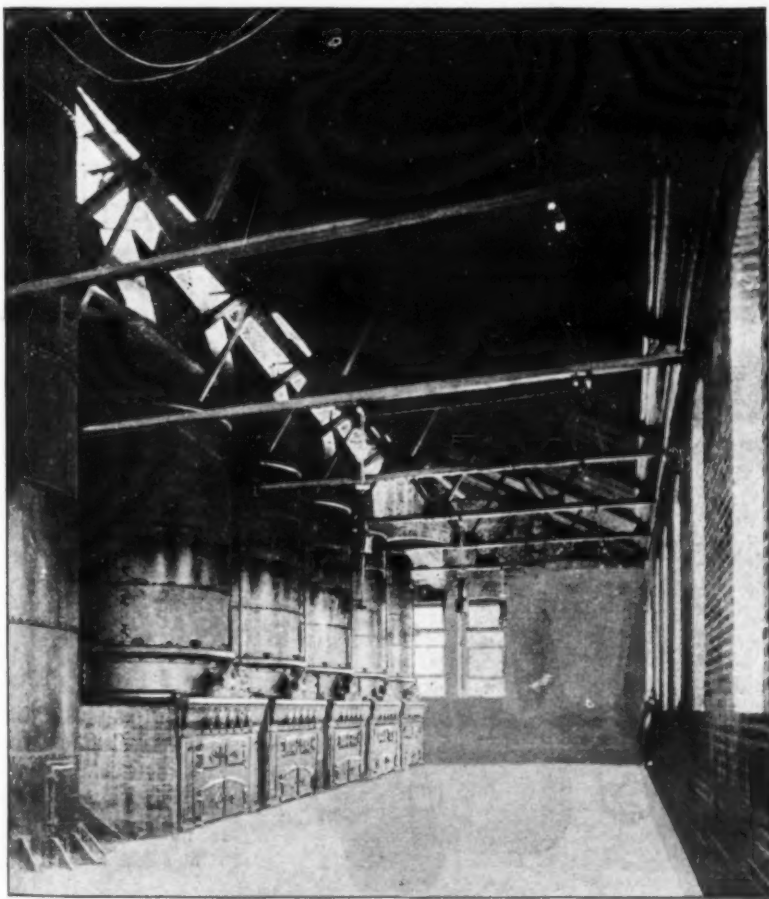


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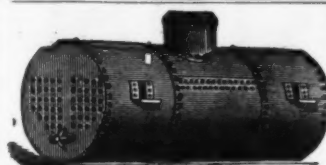
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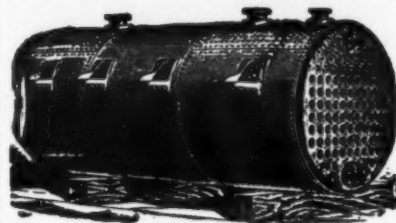
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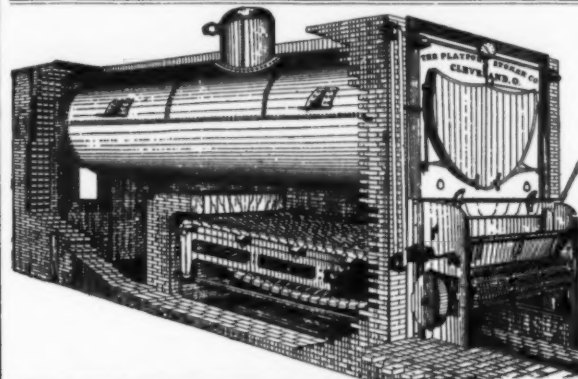


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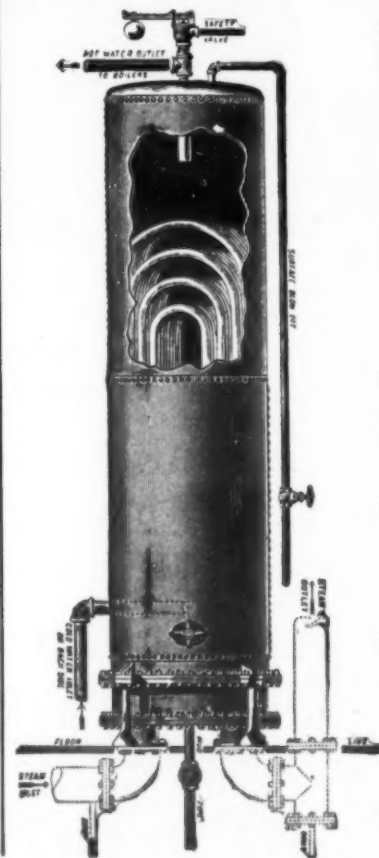
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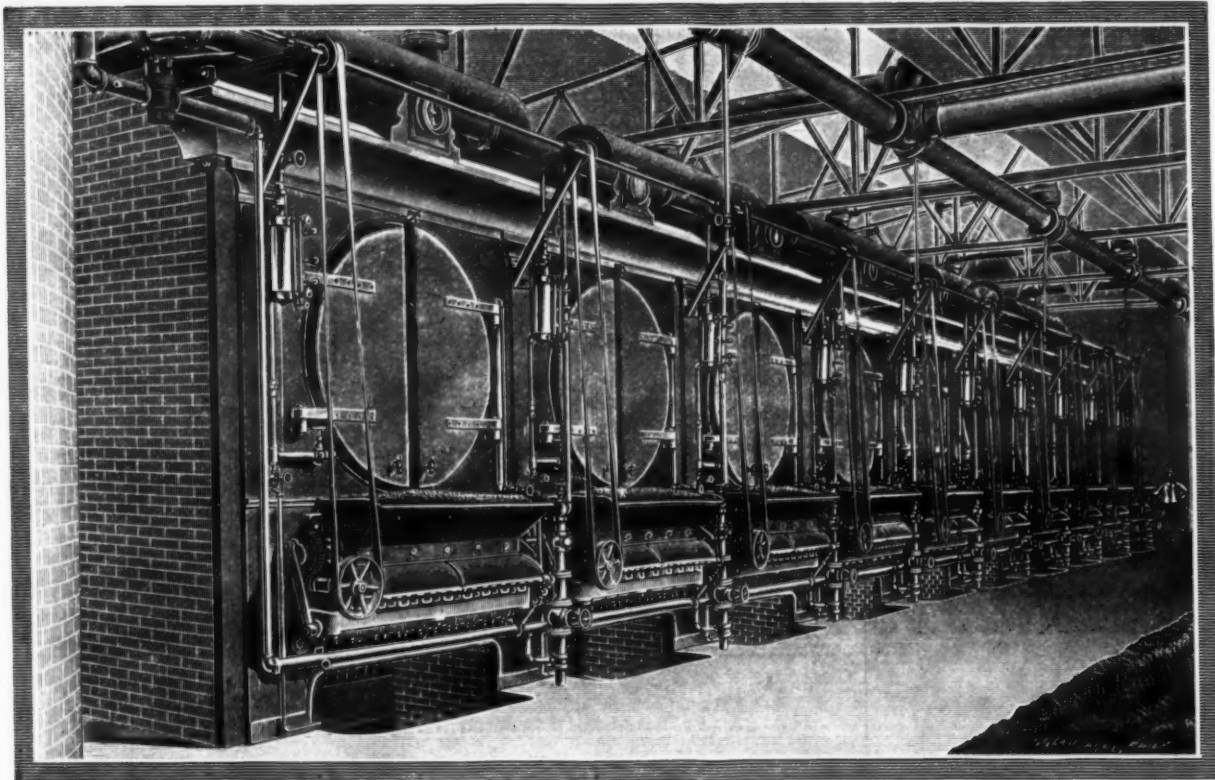
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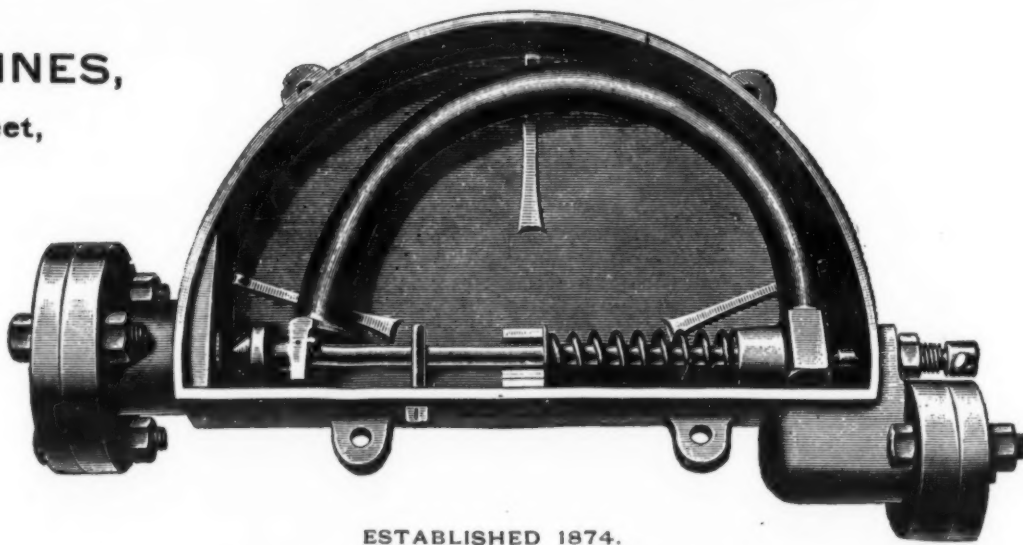
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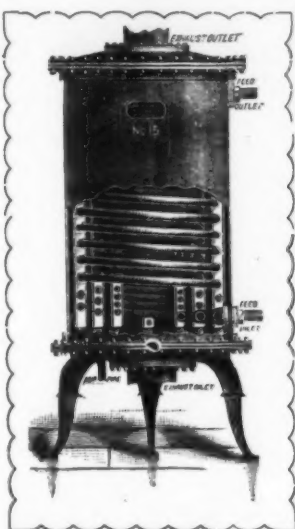
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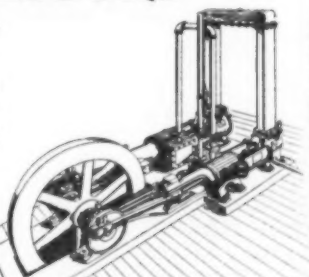
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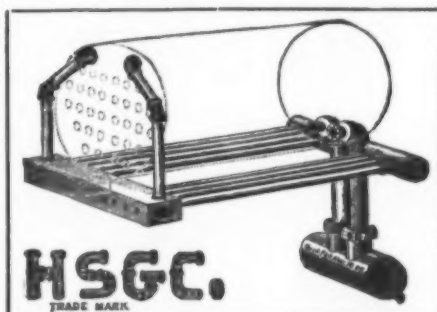
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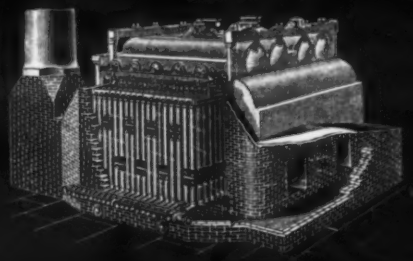
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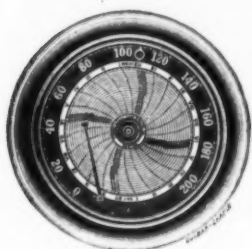
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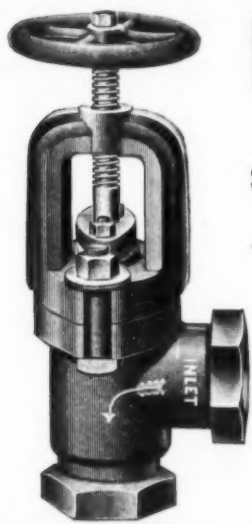
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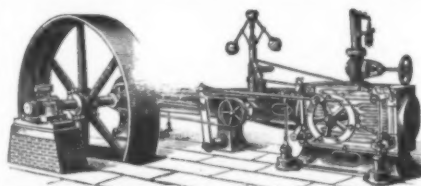
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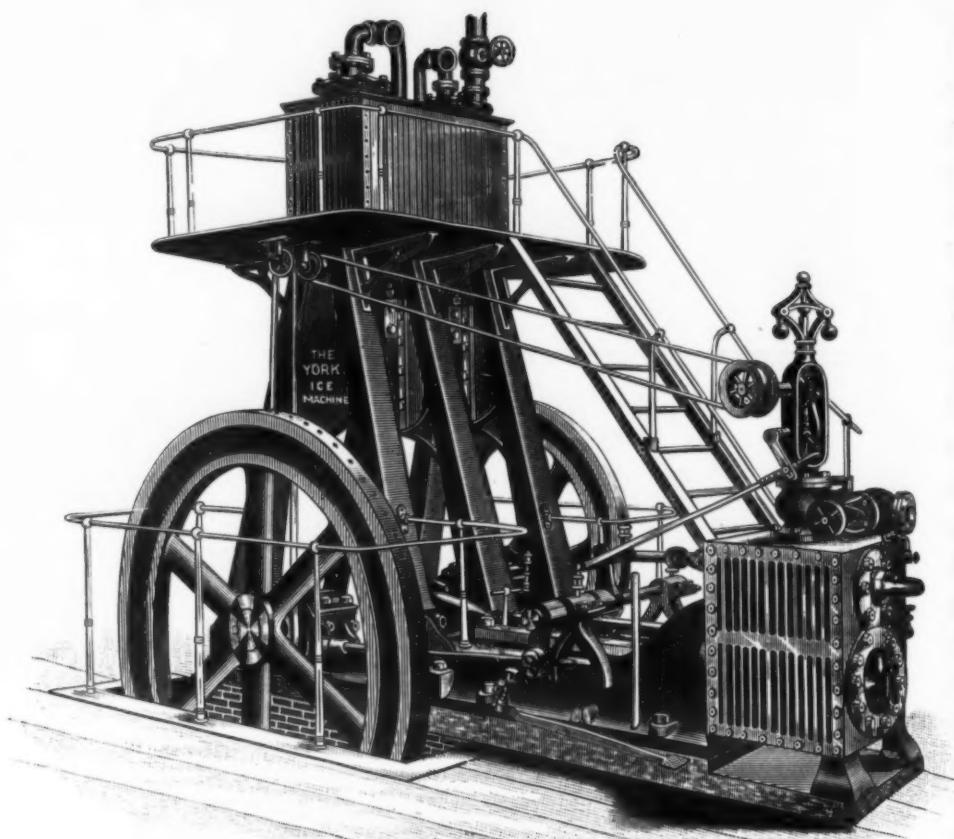
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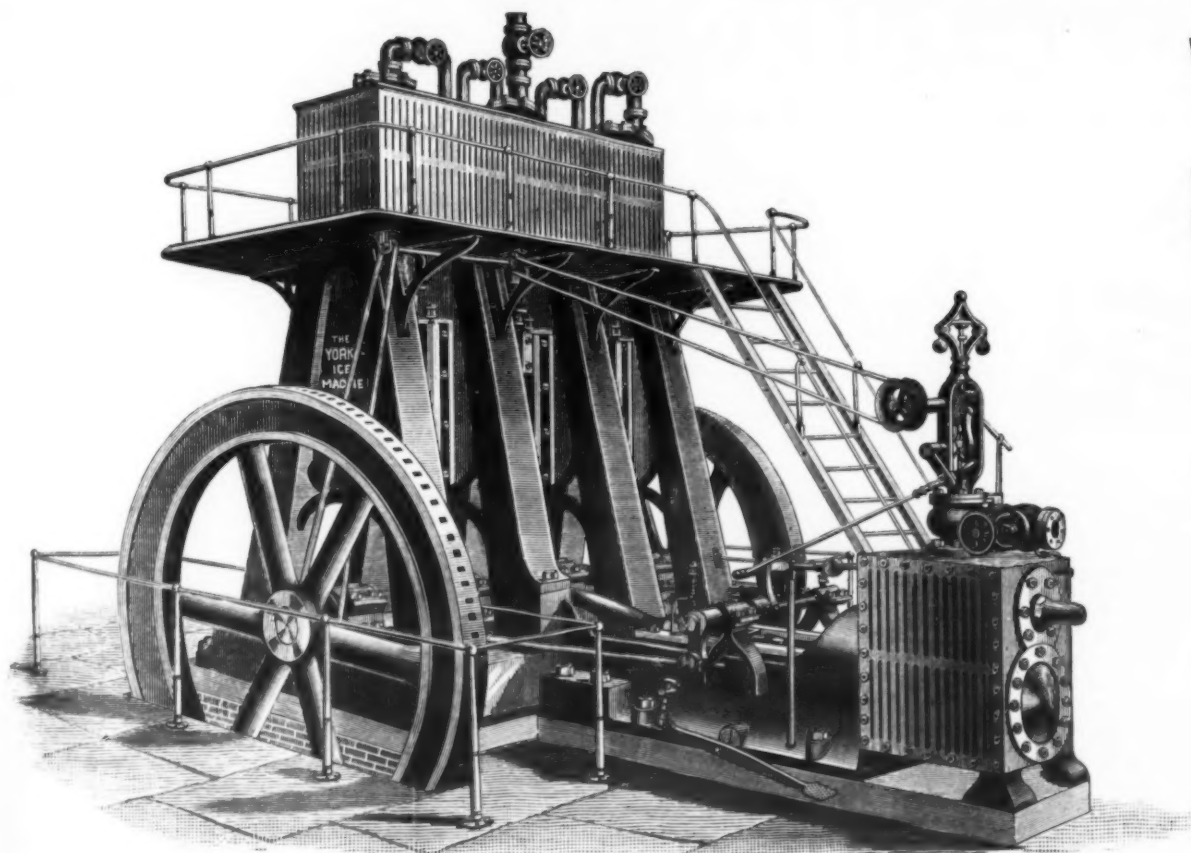
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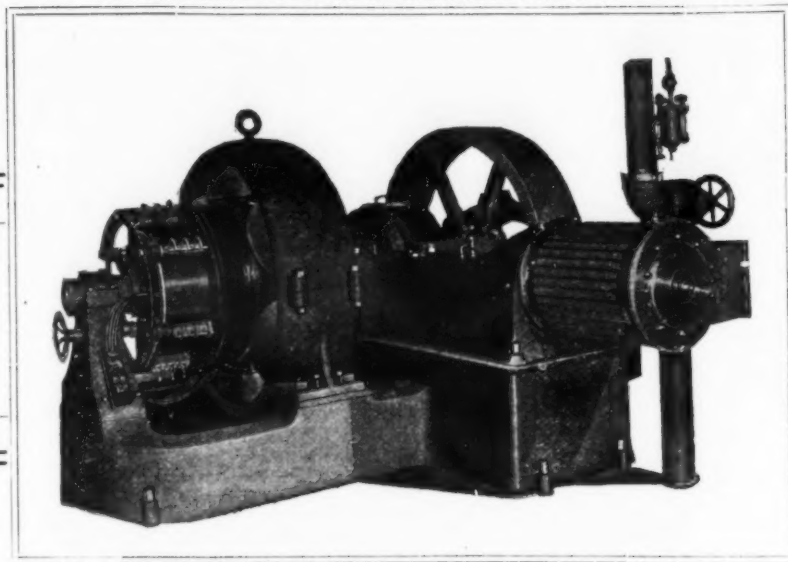
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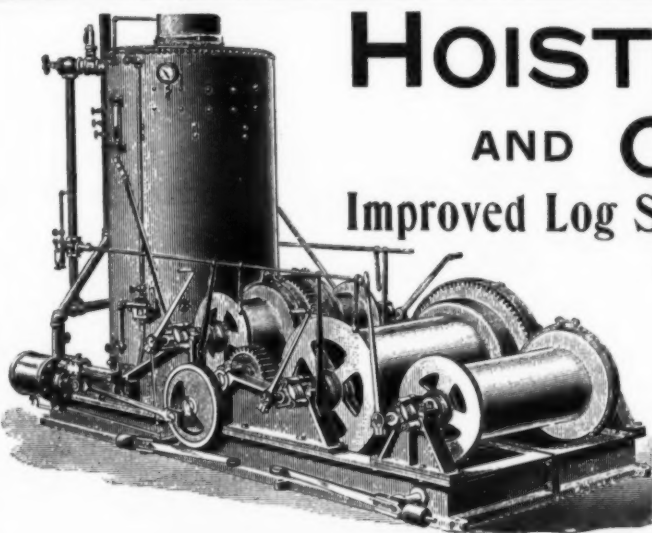
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Class.	No.	Hands empl'd	Capital inv'd	Annual product.
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Bagging factories.....	1	325	300,000	350,000
Barrel factories.....	1	123	225,000	150,000
Basket and willow-ware factories.....	2	13	10,000	25,000
Basket & veneer wks.....	1	250	75,000	125,000
Breweries.....	1	100	167,000	300,000
Broom factories.....	1	10	2,040	6,000
Candy factories.....	10	60	100,000	325,000
Carriage & wagon wks.....	6	100	50,000	100,000
Cider and vinegar.....	3	15	15,000	35,000
Cigar factories.....	9	100	60,000	202,000
Cotton factories.....	1	15	10,000	30,000
Cotton & wool pick'g.....	1	15	10,000	25,000
Cotton ties, etc.....	4	20	10,000	25,000
Envelope & box facty.....	1	63	30,000	75,000
Fertilizer works.....	12	1,400	5,325,000	4,265,000
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Foundries & iron wks.....	3	200	250,000	300,000
Ice factories.....	2	25	75,000	100,000
Job printing and bookbinding.....	8	180	325,000	450,000
Knitting factories.....	1	90	24,000	40,000
Lead factories.....	1	10	40,000	130,000
Marble & granite wks.....	5	60	49,000	75,000
Mattress factories.....	2	35	27,000	70,000
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Oil refineries.....	1	5	20,000	325,000
Proprietary estab'ls.....	35	170	75,000	1,000,000
Rice mills.....	2	130	400,000	1,000,000
Saddlery & harness.....	9	30	60,000	150,000
Sail & awning fact'ies.....	2	25	40,000	70,000
Saw and blind factories.....	5	320	350,000	850,000
Saw and lumber mills.....	8	250	300,000	850,000
Ship and boat yards.....	3	70	75,000	175,000
Shoe factories.....	1	45	25,000	100,000
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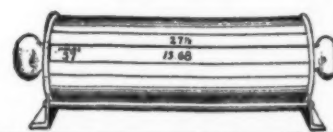
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WEEKLY.

BALTIMORE, OCTOBER 1, 1897.

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BALTIMORE, OCTOBER 1, 1897

Hon. James B. McCreery, of Kentucky, in a letter to the Manufacturers' Record referring to several articles in a recent issue, says:

I have read with interest the letter of Hon. W. M. Beckner on "Lessons from History" and the articles entitled "Eastern Impressions of the South" and "Confidence in America." You deserve much credit for presenting such opinions from our able and patriotic citizens, and I am sure they will be carefully read and considered by persons in the North, as well as in the South.

The Manufacturers' Record has received from Commissioner D. G. Purse, of the Savannah bureau of freight and transportation, a printed copy of the documents relating to the recent application for a reduction in cotton rates made before the Georgia railroad commission. A careful reading of Captain Purse's arguments shows that he was not reported correctly by the daily papers regarding his position toward the railroad. He asserted that he had never been an advocate of low rates, but had felt that the public would be better served by a scale of rates that would permit of a fair return upon a just valuation and provide for keeping up the service of the railroad.

Rich Farmers.

Dispatches from Georgia say that farmers who helped in the attempt to lynch John McCullough have been indicted, arrested and placed under bonds of \$20,000 each. What a tremendous wave of prosperity must have struck Clayton county lately! I didn't suppose there was a farmer in that State worth \$20,000.—An editorial writer in New York Press.

And nobody ever supposed you had sense enough, so far as the South is concerned, to know that or anything else. The idiosyncrasy that is so prevalent in many New York newspaper offices when matters pertaining to the South are under discussion is well illustrated in this case. Farmers "worth \$20,000" can be found in great numbers in every Southern State, but what has a bond for \$20,000 to insure a man's integrity to do with his financial worth, anyway?

The Railroads Appreciated.

The New Orleans Picayune has at Jackson, Miss., a correspondent not only wide awake as a news gatherer, but also alert to advocate any measure or any movement that may advantage Mississippi. His daily contributions enable one to keep in touch with all that is best in that State, and frequently contain suggestions of value to other Southern communities. Quite notable, in this connection, is his leading item in editorial vein under date of September 22. He says:

The times through which the people are passing ought to make them love the railroads. What on earth could the people do without them? We are too far away from the ox wagon ever for a moment to consider a return to that snail. What would the poor people of Edwards and along the Gulf-stricken coast do if they were shut off for a week from luxuries and necessities that are hourly demanded? Railroads have been called by men who wanted the votes of the people, and who thought to inflame them against these great civilizers—for that is what they are, aside from being the right arm of progress—"soulless corporations." Never was there a railroad soulless, unless the man at the head of it was soulless. Never did a railroad do a mean, uncharitable thing, unless the man at the head of it was mean and uncharitable. The fact is that, as a rule, railroads do more charitable acts than the people ever know. There is not a day in the year but what every railroad in the State—on the recommendation of some local or general attorney who has been appealed to for help—does some charitable deed for some person or other.

The railroads have done everything in their power to check the spread of yellow fever. Here and there, unfortunately, there has been a seeming clash with the authorities, but it was doubtless through some misapprehension. Today the railroads of Mississippi are doing everything possible not only to stop the fever, but to make everybody as comfortable as possible. They are putting themselves at extra expense to do this. The people must know, if they will stop to think, that the roads are injured seriously every day that the fever exists anywhere in the State, for while it so exists they are almost paralyzed, and their engines would be in the roundhouses were it not for a generous and laudable purpose to help take care of the people. If every train in the State was stopped from running, what would become of the people who are sick and those in need of provisions and medicines?

The panic in Jackson, and doubtless other places, was not checked until the Illinois Central, which has a soul, because Fish and Harahan and Dunn have souls, assured the people here that they would be furnished a train to take them beyond the frost line if fever came. And this is doubtless true of other towns that have been guaranteed similar facilities by other railroads whose officers have souls.

Yes, the people and the railroads should be allies, not enemies. They are absolutely dependent on each other. Besides, the railroads pay a heavy proportion of the taxes, State and county, which in their absence would have to come out of the people who sometimes thoughtlessly criticize their friends—the railroads. Why, some years ago, when the State treasury was empty, and there was no money in sight and would not be until the taxes were paid, the Illinois Central advanced \$60,000 in taxes six months before it would have been called upon under the law to pay taxes, thus saving the people from the humiliation of seeing their public servants go without their salaries, which they had earned, or borrow money, on which the people—the taxpayers—would have had to pay interest. Railroads are nailed to the earth. They are helpless against destruction by the mob,

and law-abiding people, in times of peril, should see to it that they are not set on by a lot of people who do not know how to think, or who are vicious, because they are not and do not know how to be good citizens.

Here is plain, common-sense English. Nobody can possibly fail to understand it. Nor can any reasonable man deny the wisdom and justice of the position taken. The moral is obvious. Wider preaching of such doctrine would be beneficial, and would be a powerful influence for the safe and sure development of a section that needs more railroad facilities, and which will expand as they are enlarged in response to a healthy demand and a conservative support.

On Technical Education.

At the last meeting of the Manufacturers' Club of Philadelphia a notable speech was made by Mr. Theodore C. Search on the subject of technical education from a business standpoint. He pointed to the phenomenal progress made by Germany in wresting from her industrial competitors some of the great markets of the world, such as Eastern Asia, Australia, Africa and South America, and said:

To the careful student of industrial conditions there is no doubt that the greater part of Germany's recent industrial success is distinctly traceable to the one factor of scientific education of the population, and the one distinguishing characteristic of this education is specialization, with the depth, the completeness of grasp and the thoroughness which come to men who direct their lives patiently and steadily toward a single definite end.

For a long time the theory that Germany owed her rapid commercial expansion to cheap labor was generally accepted. As the question is more carefully examined, however, the real cause is better understood, as a commission of the British Iron Trade Association discovered very clearly in 1895. When these commissioners returned home from their visit of inspection to the Continent they declared that German success was due pre-eminently to superiority in skill and technical training.

What is true of the German industry is true also of the manufacture of textiles. Germany strides ahead with seven-league boots, importing the raw cotton which is raised on our Southern plantations, manufacturing it into goods of a thousand kinds, to export it again into markets which were once in the almost monopolistic control of Great Britain.

Mr. Search asserted that in America manufacturers did not give the support to scientific education as they do in Germany. This he regarded as a humiliation, and he advocated a system of technical schools to be maintained by the State, contending that "every dollar expended for such schools will bring in return a twofold revenue—the first in riches and the second in the greater happiness which will come to a people who are not working, as we are today, in industrial confusion."

Such words as those of Mr. Search should take form in action by the manufacturers of this country, and by all persons who intend that the United States shall maintain their position in the world of competition and strengthen it. They are not the

words of a dreamer, but of a practical man who has observed largely, and who has put his ideas into practical effect in the establishment and development of the Philadelphia Textile School. His work is described on another page of the Manufacturers' Record, and it explains why he is an authority on industrial education, and gives an illustration of what may be accomplished on a greater scale if his advice be heeded.

For a Cotton Day.

The Nashville Exposition enters to-day upon its last month. From its opening until the present time it has been a marvelous revelation of courage, hope and enterprise. Its results should be of benefit to Tennessee and the South. No better advertisement of the possibilities of any Southern State has ever been made. And now the Nashville American urges that action should be added to advertisement, and that the energies of all should be directed toward making Nashville a manufacturing centre.

This is a wise and timely suggestion. It can be done, and as an aid to that end the Manufacturers' Record makes the additional suggestion that before the close of the exposition a special time, to be known as Cotton Day, be devoted to an exploitation of the union in the South of the cotton field and the cotton mill. Let an effort be made to assemble at Nashville representatives of the many cotton interests, to view cotton in all its phases, from the boll to the roll of goods, to inspect and study the operations of machinery from the gin and round-bale press to the latest loom, and to hear two or three speeches by authorities on subjects related to the development of the growing Southern industry.

The ends to be subserved are the inspiration to enlargement of cotton-mill operations in the South, the cultivation of kindred industries and the exhibition of the advantages of Nashville as a site for manufactures. The persistency and pluck manifested in the conduct of the exposition, if directed into this channel, cannot fail of success.

How to Run a Railroad.

I was reading how your paper fell in line with the Wall Street News in regard to President Fink's administration of the Norfolk & Western Railway in reducing expenses and increasing earnings, which means, in plain English, more work and fewer men to do it. Don't you think it would be more laudable and much more to the gentleman's credit to have increased the road's business, so as to have kept the pay-roll where it was and had an increase in the gross business? But that is just in line with Wall street. Anyone can reduce expenses by reducing force, but a good manager makes business grow to make use for more help and benefit the more of the human family. In the News's notice and your remarks on it, you both failed to say that there had been a corresponding reduction in the compensation of the president of the road.

Those are the words of Mr. Dan

Troy, deputy clerk of the court of Bee county, Texas, in a letter to the Manufacturers' Record. Of course, we are not in as favorable position as he to make suggestions about the operation of a railroad, but we cannot agree with him entirely in his question and in his comment. It would have been an excellent thing to increase the road's business, so as to preserve the payroll, but in the stress of modern competition it is not customary to keep more men than are necessary on a force, or when a loss would be entailed thereby. Though the ultimate effect of a well-managed railroad is to benefit that portion of the human family dwelling within its territory, the purpose of such an undertaking is like that of any other business—to earn money. It is no more philanthropic than an iron foundry. When a business is a losing one it must be closed out entirely, or a skilled manager must be employed, at a higher salary, perhaps, than has ever been paid before, to revive it. The wisest policy for him to pursue generally is to reduce expenses to the limit where the business may exist, and upon that basis to bring it gradually into a flourishing condition again, when more men will be employed and greater development be had.

So with a railroad. Its manager cannot be expected to create business, however great his ability, unless he has the machinery for it in complete working order. If the machinery is rusty or clogged, his first task is to make repairs. For instance, if he has control of only 500 cars, and there are 1000 carloads of wheat to be moved, he cannot move the wheat by doubling the number of men, and it would not pay him to move even the 500 carloads if he employed more men than were absolutely necessary. His sensible plan is to reduce operating expenses to the minimum and to use whatever is saved in that way in improving the equipment and rolling stock to such a point that he may handle profitably all the business within sight, and then seek for new lines.

We wonder whether our friend, Mr. Dan Troy, has not taken his cue from the business of politics. That is the only occupation in which the number of the employed is greater than the necessity. But their wages are not paid by the persons directly benefited by their employment, which makes a great difference. But such a plan adopted by any legitimate business would wreck it in six months. Would not Mr. Troy be doing something to "benefit the more of the human family" if he would create business enough in the office of the county court to make necessary the employment of a dozen deputies where only one is needed now. If railroad managers can at their will create business in order to increase the number of hands, why cannot Mr. Troy do the same? Is he unable to do what he demands of others?

The yellow-fever scare seems to be likely to do the South more damage than the yellow fever. Some cities, in their anxiety to reap a trifling material advantage from the plight of others, have resorted to policies that can only result in injury to all cities if persisted in, while some newspapers are rendering absolutely inutile any criticism they may hereafter see fit to make of sensational journalism in the North. The South has within itself the ability to quarantine both plagues effectively, and to apply the eradicator of such evil germs.

THE PEOPLE AND THE RAILROADS

Their Relations Clearly Defined in an Argument Before the Georgia Commission.

The Georgia railroad commission recently declined to order a reduction of 25 per cent. for rates on cotton on the ground that the revenues received by the various railroads of the State do not at present authorize any reduction in the rates. The decision was valuable in evidencing the conservatism of the commission and also in having been the occasion for an argument by General Counsel J. B. Cumming, of the Georgia Railroad, which sets forth the relations of the railroads, the people and the State so clearly that it is reproduced as follows:

"The theory on which railroads were originally operated was that of private property. The stockholders controlled and managed their railroad as they would any other property which they owned, and would resent outside interference with as sincere and genuine indignation as if it were their factory or plantation which was invaded. Of course, that theory of railroad management has passed away. The most extreme champion of railroad rights recognizes the fact that the railroads have, in their relation to the public, taken the place of the highways of the country. They can no more be permitted to prescribe the terms on which the citizen shall use these new highways than private citizens could fix charges to be paid by travelers and carriers on the old highways.

"The recognition of this truth—a recognition which, looking back, we must consider to have been tardy—led to the establishment of railroad commissions. It was but natural that under the circumstances of their creation all concerned—railroads, legislators and people—should have regarded them only in the light of machinery to cut down rates of freight and passenger carriage. Doubtless this was the purpose which alone, at the inception of the system of commissions, was naturally in the minds of all persons. But a different view was obliged to be evolved from the facts as they developed. It was obliged to follow that if the railroads were deprived of the power to care for themselves it became the duty of the power which stripped them of the right of self-preservation itself to take care of them. Doubtless the view still prevalent in the popular mind is that it is the sole mission of the commission to cut down rates. The people, at least the unthinking part of the public, very probably looking upon railroads as their natural enemies, consider the railroad commission as primarily, if not altogether, a weapon of attack and defense against the railroads.

"I do not hesitate to say that this conception is radically wrong. We must begin with the recognition of the absolute necessity to every civilized society. I shall not, of course, dwell on this necessity. It is admitted by all without argument. We can contemplate the existence of a civilized, industrial society without railroads no more than we can conceive of life without food.

"The first thing, therefore, to be secured to the people of Georgia is an adequate supply of railroads. They must be supported, whatever their support may cost. If they can be supported by low rates, let low prevail. If they require high rates for their support, as I shall hereafter define support, then the rates must be high. In a word, the paramount business to engage the attention of the commission is the support of the railroads, whatever that may cost the people in the way of rates.

"This is no preference of the railroads

over the people; it is securing to the people that instrumentality of civilization which is of paramount importance to the people.

"Therefore, whatever may have been the original conception of a railroad commission in the mind of the legislature; whatever may have been the sense of injustice and oppression felt by the people out of which the device of a commission sprung; however natural it may have been, in view of the circumstances of its creation, to regard the commission wholly as machinery devised to curb the railroads, in the advance of ideas, we must recognize that the true mission of the commission is to raise an adequate revenue for the support of the railroads.

"The federal government cannot go on without an adequate revenue. No one ever questions that statement. In the aversion which the American people have for direct taxation, their policy has always been to levy this revenue by duties on imports. There has never been, I believe, any difference of opinion among them on this main proposition. The divergent opinions have related to tariffs for revenue only, tariffs with incidental protection and tariffs in which protection has been the primary purpose.

"The commission is in a position strictly analogous to a Congress of the United States engaged in arranging a tariff for revenue only. The railroads cannot be turned loose to collect such freight and passenger rates as each chooses and as before the days of regulation they were accustomed to do. The government cannot levy taxes arbitrarily, as is the way with absolute government. The analogies between an absolute government raising revenue without uniformity and regularity at the will of the sovereign and the former management of railroads without State regulation is at least close. The analogy between a government proceeding constitutionally and according to law and the railroads under State regulation is perfect. Perfect, also, is the analogy between this commission and the Congress of the United States engaged in framing a tariff for revenue only. Perhaps the analogy would be more strict if the Congress were also providing in its tariff for incidental protection for weak industries. The government must be supported. The revenue for its support must be raised by legal means. Not less clear is it that the railroads must be operated. The means for operating them must be raised by rules prescribed by this commission. But supported they must be, and the primary and paramount function of this commission is to see to it that their regulations effect that purpose. If it can be attained by low rates, let low rates prevail; if high rates are necessary for its accomplishment, high rates must be imposed. The failure of this commission to prescribe high rates where they are requisite would be quite as flagrant a breach of duty as the omission to cut down high rates when they are not needed for the support of the railroads.

"Believing, as I do, that whatever may have been the original spirit moving the legislature to create the commission, and even whatever may be the language of the creating act, the evolution of the commission idea and the practical development of railroad legislation by commissions brings us to the position I have taken. I ask what would be thought of a Congress that took one leading article of imports and dealt with it alone, and fixed the duty on it without reference to other articles or to the general revenue?

"Whenever, therefore, the attention of the commission is given to a change of rates it becomes its duty to start with the inquiry whether the existing sched-

ule, taken as a whole, furnishes enough revenue for the support of the railroads. And here I would bring to the front the proposition that support means more than making both ends meet in operating expenses. It means also a fair and steady return for the capital economically invested and economically managed in the railroad. There is no soundness of policy, expediency of justice, in holding the view and acting on it that railroad investments are any less entitled than any other to receive a fair return for the investments. I shall not argue this proposition; it is admitted at once in every candid and open mind, and it is a waste of time to argue with minds of a different character. It is with such views as these that the commission should act: First, operating expenses in the most comprehensive meaning of the phrase—covering all parts of railroad administration—are to be provided for. The expenses to be thus provided for are not the expenses of a ram-shacking railroad—a railroad which can manage to run after some unsatisfactory fashion—but a railroad brought up at least to the average standard of the age in speed, safety, comfort and general efficiency. While this branch of the subject is under consideration by the commissioners their minds should be absolutely closed to the minor interest of the public in the matter of rates. For the time being the interest of the public should be considered only in its relation to its prime necessity of having an efficient railroad. This first necessity being provided for, the consideration of the adjustment of rates in the interest of the public may be entered upon, but, of course, without disturbance of the essential status of a sufficient revenue for the railroads, a thing far more important to the public itself than a mere adjustment of rates.

"Let the honorable commission, therefore, start on the consideration of this application by deciding in their own minds whether the railroads can stand a reduction of the revenue which the commissioners' schedule of rates as a whole provide. If the commission reaches the conclusion that the railroads cannot submit to any reduction that ought to end the matter, just as much as a conclusion reached by Congress that the revenue raised for the government was not more than sufficient for its just needs ought to produce the result of no reduction in taxes, however onerous the taxes may be.

"These views are strictly in accord with the position taken by the courts, which, in effect, is that the commission schedules must be considered as a whole in ascertaining their justness and legality, which depend upon the question whether, as a whole, the rates prescribed will pay the cost of the necessary skilled service and best appliances and keeping the same in proper condition, interest on bonds, and then leave something for dividends."

Iron and Steel Statistics.

The United States Geological Survey has published in monograph form "Iron and Steel and Allied Industries in All Countries." This is the work of Mr. James M. Swank, general manager of the American Iron and Steel Association, an authority on the subject. It is a comprehensive summary of the progress of the iron and steel industries in this country compared with that of other countries for a long series of years; it includes tables of production and prices and of imports and exports, and statistics of coal production and railroad extension. The publication is valuable for manufacturers, legislators and writers upon industrial topics.

SUGAR BEETS IN THE SOUTH.

Secretary Wilson, of the Department of Agriculture, Thinks They Can Be Cultivated Successfully.

[Special Cor. Manufacturers' Record.]
Washington, D. C., September 29.

The Department of Agriculture is beginning to receive returns from the samples of beet seed sent out last year for experimental purposes, and all who are interested in the South will be pleased to learn that Secretary Wilson is much gratified over the reports from this section of the country. In all, 22,000 packages of seed were sent to various portions of the United States and Territories. All of the Southern States, it is understood, were included in the distribution. With each package were sent instructions as to the proper manner of planting the seed and cultivating the beets. Of the results reported to the Agricultural Department thus far, beets grown in what is known as the Pecos Valley of New Mexico have yielded about 20 per cent. of saccharine matter. On the State farm near Richmond, Va., beets have been grown which, analyzed by local experts, show from 12 to 18 per cent.

Secretary Wilson, in speaking of the matter to a representative of the Manufacturers' Record, said: "It has been generally believed that beets for sugar purposes could only be grown successfully in a belt of country of which the State of Iowa formed the southern limit. This claim was based upon the experience of the German beet-growers, and was due to the fact that in the belt referred to the conditions of the temperature and moisture seemed most favorable. During the month of September, when the beet matures, it is necessary to have dry weather, else it may begin sprouting again and the proportion of its sugar-making properties becomes greatly reduced. Next year we shall distribute seed throughout the country, and include all of the southern portion, even the tide-water sections. From the results obtained I see no reason why the culture with the sugar beet cannot be successfully carried on in the South in areas large enough to warrant the operation of beet-sugar factories. In Nebraska and other points in the West these plants are now being operated successfully. A profitable yield averages twelve tons to the acre. An area of between 3200 and 4000 acres should be sufficient to supply a factory."

Mr. Wilson said that the German sugar beet averaged about 14 per cent. of sugar-making properties, which indicates that the samples from New Mexico and Virginia are considerably in excess of what is needed to insure the success of growing such beets in this country. The Secretary intends distributing all the American beet seed which he can procure, and expects to obtain at least three tons from the Pecos Valley growers. The balance needed will be supplied from German growers. The Department of Agriculture is at present analyzing from fifty to 100 samples daily.

LOOKING TO THE FUTURE.

Houston Preparing for Its Midwinter Carnival.

[Special Cor. Manufacturers' Record.]

Houston, Texas, September 27.

Houston people are working as a unit on a great event which will occur in this city December 5 to 11, inclusive. It will be a midwinter carnival of fruits, flowers and vegetables, at which Texas will make an effort to prove that she can grow anything in midwinter that can be produced in California, Florida or anywhere

else in the temperate zone. There is already great enthusiasm in this entertainment, which will not only be beautiful in connection with fruits and flowers, but thoroughly practical when it comes to the showing of vegetables.

One of the most interesting features of this great midwinter gala week will be Pioneers' Day. The early settlers from all portions of Texas will be invited to Houston as honored guests and be under the care of the pioneers of this (Harris) county.

There is still another item which is attracting considerable attention, and that is Railroad Day, in which it is hoped that all of the fourteen lines centering in this city will have an individual float.

The Mennonite farmers of Kansas and other States are locating large colonies in many portions of South Texas. Col. W. B. Slosson, of this city, is the prime mover in this new and valuable immigration. Between the 22d and the 24th almost 200 Mennonite farmers reached this section. One hundred and ten came in one party under the direction of Colonel Slosson. The majority of these newcomers are from McPherson, Marion and Harvey counties, Kansas, the centre of the wheat section of that State. Among those who settled three weeks ago, particulars of which was published in the Manufacturers' Record, several have already built houses and are occupying them.

SATISFACTORY ORDER BOOKS.

The Iron Market at Birmingham Continues Strong.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., September 28.

The iron market the past week has been strong, with only limited transactions by the furnaces. The demand has been good, in some cases importunate, but the order books for 1897 delivery are as full as sellers desire. There are probably two interests which could yet take limited orders for 1897 without inconvenience. Even then the grade desired would be an influential factor. Quotations as last given yet stand official, though what sales are being made are at an advance of ten to fifteen cents. Gray forge is \$6.75, with some sales at \$6.85; No. 1 foundry is \$7.75, with sales at \$7.90, and No. 2 foundry is quoted at \$7.25, with sales at \$7.35. Some sales are reported at higher prices, but the figures given are fairly the market. For 1898 delivery there is an indisposition to sell beyond March. Various reports prevail as to market, and the figures current are on the basis above given to twenty-five cents advance over them. The warrant yards are now being drawn upon to swell shipments, which are restricted to the tonnage available. Deliveries the balance of the year will be heavy, and nearly all of it was bought at low prices.

The furnaces are not doing much in the way of export, for reasons given above, but the demand is being fed from the warrant yards. As the sales are made and the movement controlled at Eastern points, satisfactory data is hard to get.

The United States Car Co., whose headquarters were at Anniston, has completed its reorganization, and has been merged into the Illinois Car & Equipment Co. It resumes operations at once with its foundry, and will follow with its other departments until all are in operation and giving employment to 1200 workmen. Its first delivery of cars on its contract with the Louisville & Nashville Railroad will be made on October 11. At the Avondale Print Mills the brick work is practically completed, and the buildings will soon be ready for the

machinery. The fertilizer factory will be in operation this week, and by the middle of October the powder works will start up. The coal operators are feeling to some extent the baneful effects of the yellow-fever scare, as there is a practical suspension of business at many points supplied by this district with their coal. Both rolling mills are running with full forces. The disaffection at the Gate City Mill was short-lived, and nothing more than a passing incident. At the Birmingham Mill every department is running, and the prospect for a continuous good business is still very favorable. There has been some countermanding of orders from the fever-infected districts, but they do not yet amount to anything serious.

The minor industries still report a satisfactory condition of affairs. There are no special features to report except that the overhauling and rebuilding of a furnace at each Sheffield and Anniston has been secured by Birmingham parties. There seems to be plenty of general miscellaneous business fairly divided between the various interests, so that each gets a piece of the pie. The enterprises mentioned as being in embryo are being carefully nursed, and appearances indicate will soon be ready for presentation. In real estate a keen interest is maintained, and transactions are satisfactory. The inquiry for real estate has in the last ten days been directed, to some extent, to mineral lands advantageously located. A prominent and interested operator reports more inquiry in this direction than for five years past. J. M. K.

PHILADELPHIA TEXTILE SCHOOL.

Success of the Unremitting Work of Mr. Theodore C. Search.

A natural result of the enormous expansion of the textile industries of the South in recent years is the very general and serious interest in technical education which is now being manifested by Southern manufacturers. The recognition of the necessity for some systematic and practical plan for training help, which will not only tend to raise the general efficiency and skill of mill labor, but will also produce minds capable of origination and administration, is a symptom that betokens much good to the textile industries of the South.

Practical technical education in the various departments of the textile industries is, comparatively speaking, a new idea in the United States. It was only thirteen years ago that the Philadelphia Textile School began its career, which has been marked by such remarkable success, and it was less than a year ago that the Lowell Textile School opened its doors for the training of skilled mill help. With only a single institution of the kind in this country for a dozen years, however, it must not be assumed that this nation is lagging behind in this particular branch of education, for the record of progress of the pioneer school shows that it has kept fully up with the world's advance in this line, and is now the equal in its equipment, methods and results of the best of the foreign textile training establishments.

As a distinctively American institution, and as one of the best of its kind in the world, the Philadelphia Textile School is a fit subject of careful study for the textile manufacturers of the South. When they go to Philadelphia this fall to meet with the members of the New England Cotton Manufacturers' Association they will hold their sessions in the hall of this school, and no man of them should fail to study its methods and work as fully as opportunity shall permit. When the time shall come for

the establishment of the next textile school, which will be in the South, and at no far-distant future time, this institution will serve as an example of advanced ideas and practices in textile education.

Philadelphia is remarkable for nothing if not for the public spirit of its citizens, and the large number of these who are always ready, either collectively or as individuals, to give of their time, energy and money to enterprises that are broadly beneficial to the public. The Philadelphia Textile School could never have come into existence with any narrow or selfish ends to serve, and its creation and development have been the result of unselfish effort on the part of those who foresaw its importance and possibilities in its relation to the great textile industries of the city of Philadelphia.

Theodore C. Search's Work.

The moving spirit in the organization of the Philadelphia Textile School, and the man who has worked most unremittingly for its development, is Theodore C. Search, for many years a leading woolen and worsted-yarn manufacturer, and now the treasurer and managing director of the John B. Stetson Co., of Philadelphia. While he was president of the old Philadelphia Textile Association, fifteen years ago, Mr. Search undertook to awaken the manufacturers of Philadelphia to the importance of a thoroughly practical training school for the textile industries. After an unsuccessful attempt to raise a fund of \$50,000 for the establishment of such a school, Mr. Search assumed the entire responsibility of organizing and equipping a textile school, and alone and unaided he carried the enterprise to a stage where its practical character and utility were unmistakably demonstrated. Then the other manufacturers came to his aid, and through successive stages of development the present magnificent institution has come into existence.

Four years ago the school emerged from the quarters which rapid growth had rendered wholly inadequate, and the buildings then vacated by the Pennsylvania Institution for the Deaf and Dumb were acquired at a cost of upwards of \$550,000. These buildings stand at the corner of Broad and Pine streets, in Philadelphia, occupying a lot measuring 200x400 feet. The buildings are spacious, and well adapted for the purposes to which they are devoted, and in point of advantageous location and size the property is not approached by any institution of kindred character in the United States.

In organization and equipment the Philadelphia Textile School is not excelled in the world. In its appointments, as in its methods, it has received the highest commendation from expert judges familiar with the best institutions of a similar character in Europe. Among these are Prof. N. Langowoj, director of the Government Textile School in St. Petersburg, who said that the School of Industrial Art was the most interesting thing he had seen in America, and that he should have felt well paid if he had made the journey from Russia for the sole purpose of visiting it.

Mr. Edward Martin, commissioner of education in France, said: "We have no schools in France doing work of the excellence and variety which distinguishes the work of this school."

M. Jules Steeg, inspector-general of education in France, and Professor Lemcke, director of the Royal Textile School of Crefeld, in Prussia; E. Henry Reiter, commissioner from Switzerland to examine into the progress of industries in America, and many others,

speaking with almost if not quite equal authority, have borne similar testimony to the quality of the work accomplished by this school.

The completeness and excellence of the mechanical equipment of the school is in itself an evidence of the high appreciation with which the institution is regarded by the textile industries, for all the manufacturers of textile machinery and appliances of note in the United States, as well as several foreign machinery builders, have generously contributed the best of their machines and fittings for the use of the school. The equipment of the school has been kept strictly up to date by the addition of every new and improved machine or device that marks any advance in textile manufacture.

In Different Departments.

An enumeration of the various machines in use would exceed the limits of this article, but an outline of the different departments will serve to indicate the diversity of the mechanical equipment. They are:

Wool stock preparing; wool carding and spinning; cotton carding and spinning; cotton and wool spooling and winding; silk reeling, winding and warping; cotton, worsted and wool warping and beaming.

Hand weaving—(a) cotton and union fabrics, (b) worsted and woolen work, (c) jacquard and special work, (d) silk and special fabrics.

Power weaving—(a) cotton, (b) woolen and worsted, (c) ingrain carpets, (d) silk and special fabrics.

Jacquard card cutting; department of chemistry; dyeing; finishing.

The fact that over 120 looms, of all styles and makes of recent days, are in active use in the school may convey some idea of the magnitude of the operations of the institution. The floor space occupied by the classrooms aggregate close upon three acres, and over forty professors, instructors and lecturers are included in the faculty.

Courses of Study.

Instruction is given in both day and night classes, thus making the facilities of the school broadly available to all classes of students. The courses of study for the day classes are as follows:

1. Regular Course.—Embraces full instruction in cotton, wool and silk yarns and fabrics, and covers a period of three years.
2. Cotton Course.—Embraces all classes of cotton fabrics, and extends over two years.
3. Woolen Course.—Includes the study of wools and worsteds only, covering two years of work.
4. Chemistry and Dyeing Course.—Brings the study of the chemistry of fibres, chemistry of dyeing, qualitative analysis and dyeing into the period of one year.
5. Wool Carding and Spinning Course.—Includes the study of blending, mixing and oiling of stock, carding and spinning and a limited amount of chemistry and dyeing, covering one year.
6. Ingrain Carpet Course.—A single year devoted to ingrain designing, card cutting and weaving.
7. Academic Textile Course.—A new course, designed for students who are engaged in academic studies, and who desire also to acquire a knowledge of textiles.

For the evening classes there is a different grouping of the principal studies into four courses, each extending through three years.

Every feature of the work of the Philadelphia Textile School is distinguished by its eminently practical character. A

young man who applies himself diligently and with intelligence to the work set before him in the school learns something of every step in the varied processes of cotton, wool and silk manufacture. There is practical instruction in every stage of manufacture, from the raw cotton, the wool in the fleece or the silk in the cocoon, to the most intricate and beautiful fabric woven from these fibres. The fibres themselves are thoroughly studied, their preparation is learned by actual working of the raw material, every detail of the machinery is made familiar to the student and the production of the yarns and fabrics themselves is the actual handiwork of the young men. Even the designing of the fabrics and the application of the pattern to the loom is the work of the student.

School of Applied Art.

In its artistic side, the Philadelphia Textile School enjoys advantages which are of inestimable value, and which places this particular institution in a leading position among the world's institutions of this kind. Although usually mentioned and considered as an institution complete and distinct in itself, the school is in reality one department in a more comprehensive educational institution, the full title of which is the Pennsylvania Museum and School of Industrial Art. By the side of the Textile School, and exerting a powerful influence of an artistic nature, is the School of Applied Art, in which are provided abundant facilities for thorough instruction in the purely artistic branches, together with their practical application to the productive industries. A further feature which is of great importance is the magnificent museum of artistic fabrics, the most complete collection in America, and the result of twenty years of work. It is easy to recognize the value of such a museum which permits the comparative study of the textile fabrics of different countries and different times. This union of factory, studio and art museum creates an influence upon the student which cannot be found in any other textile school, and its impress is clearly discernible in the work of the young men and women.

After all, there is no test so good as the measure of results. The best evidence of the thoroughness and practical efficiency of the work of the Philadelphia Textile School is the readiness with which the graduates of the school are taken into important positions by the manufacturers. The school has become so well recognized as a source of supply of skilled and artistic operatives that many of the students have desirable places awaiting them upon the completion of their course of study. As designers, dyers, superintendents, managers and manufacturers on their own account they can be found scattered through many of the leading mills of the country.

To a New England manufacturer who visited the school some months ago, Mr. Theodore C. Search remarked, in the course of conversation: "I understand that you have some of our young men in your mill."

"Yes," was the response; "I have four graduates of the Philadelphia Textile School, and the purpose of my present visit is to get the fifth."

And he did.

CEMENT FROM FURNACE SLAG.

The Maryland Cement Co.'s Plant Erected at Sparrow's Point.

The Maryland Cement Co., which was organized some time ago for the purpose of making commercial cement out of the

slag from blast furnaces, is erecting a plant at Sparrow's Point, Md., which will be ready for operation in about six weeks. The plant consists of the main building, 120x60 feet, an engine and boiler-house 50x80 feet, a storage warehouse 120x90 feet, also a cooper shop. The buildings are constructed of corrugated iron, and the plant will have a capacity for 500 barrels of cement daily. Steam-power will be used, the boilers representing 300 horse-power.

The company will make what is known as the Toltee cement, which is also made at a plant now in operation at Newark, N. J. The process in brief is as follows: A stream of water is applied to a stream of slag in its liquid or molten state. The contact reduces the slag into particles each about the size of a pea. In this form the compound is passed through a series of Sturtevant and Ball crushing and reduction mills, which reduce it to a pulverized state. It is thoroughly dried by a steam process, and is then ready to be converted into the cement. The method employed, which is a secret, changes it into the necessary form for commercial purposes within twenty-four hours. The inventor claims that slag from any ordinary blast furnace can be used. The tests which have been made of the cement show that seven-day samples resisted an average pressure of 534 pounds to the square inch before breaking, and one-day samples an average of 175 pounds to the square inch. The standard of cement required by the city of Baltimore in its work is 400 pounds pressure for the seven-day and 125 pounds pressure for the one-day. This would indicate that the slag cement is of a high standard of quality.

The Maryland Cement Co. has a capital of \$50,000. The president is Frank H. Sloan; vice-president, Edward H. Wales; treasurer, G. B. Boilleau, and secretary, W. G. Soldan. The investment in the plant, according to the statement of President Sloan, is about \$100,000. It is stated that after the present plant is in operation the company may visit the Birmingham and other furnace districts with the view of establishing works in that section of the South.

PRESIDENT STILWELL'S VISIT.

Work of Rebuilding at Port Arthur Promptly Begun.

The Beaumont (Texas) Semi-Weekly Review of September 17 had the following account of the visit of President Stilwell and others to Port Arthur after the storm:

"About 8 o'clock Wednesday evening a special train, consisting of two private coaches and engine, pulled into Beaumont via the Kansas City, Pittsburg & Gulf Railroad. There were on board President Arthur E. Stilwell, General Attorney J. McD. Trimble, General Manager Robert Gillham, Assistant General Manager F. S. Hammond, Chief Architect George Mathews and Superintendent Morley, all of the Kansas City, Pittsburg & Gulf road. Messrs. Richardson and Whitman, of the Kansas City Star, accompanied the party. After a brief stop at the Washington street depot, the train pulled out for Port Arthur.

"The visit was hastened on account of the recent storm, and the company's desire to furnish immediate relief to the citizens of Port Arthur who suffered loss on that occasion. The trip was made from Kansas City to Port Arthur in about twenty-seven hours actual running time, or in nine hours less time than ever before made between these points.

"The officials remained at Port Arthur

for nearly twenty-four hours, which time was actively employed by them in effecting arrangements for the relief of the storm sufferers. The company had previously appropriated \$10,000 to be used in rebuilding the homes that were destroyed. This work was immediately commenced, and will be vigorously prosecuted to completion. Mr. Stilwell stated that if the \$10,000 was found to be insufficient to repair the loss, further contribution for that purpose would be promptly made.

"An informal meeting of citizens was held at Port Arthur Thursday, at which President Stilwell and other officials were present. The most encouraging assurances for the future of the young city were given, and also in reference to the company's determination to carry out its export policy, arrangements for which have been perfected.

"General Manager Gillham stated, on this trip, that the company was perfecting arrangements for the erection at Port Arthur of a \$20,000 warehouse for the reception of grain and other food products, in connection with the company's export business, there now being enough of such traffic in sight to warrant the expense.

"Mr. Stilwell referred in grateful terms to the kind and liberal spirit shown by the people of Beaumont to Port Arthur's citizens in their hour of distress, both in sending relief committees to their aid and in tendering the stricken ones a burial place for their dead.

"The following card of thanks, sent to County Judge Ed. P. Gray, explains itself:

"Port Arthur, Texas, September 16.—Many thanks for kindness of people of Beaumont for subscription to Port Arthur sufferers. We have made all arrangements for everybody.

"A. E. STILWELL."

"Mr. Stilwell and party returned North Thursday evening. They were accompanied by General Manager F. A. Hornbeck, of the Port Arthur Townsite Co., who reached Port Arthur Tuesday, and had been earnestly at work for the relief of the sufferers."

Commenting upon the promptness of the officials the Houston Post says:

"The indomitable pluck and energy which has made the Kansas City, Pittsburg & Gulf and its Southern terminus, Port Arthur, known in all parts of the world will be equal to the temporary trouble in which the storm has placed them, or the Post has a mistaken estimate of the men behind this enterprise.

"The independence displayed by the people of Port Arthur in declining assistance from the outside proves them to be made of the kind of stuff that does not consent to retreat even under trying circumstances.

"The Post voices the unanimous sentiment of the people of Houston when it gives expression to the hope that Port Arthur will, like Chicago, after the great fire, take hold with renewed confidence and not only build up the waste places, but go forward in accomplishing all that has been promised in the past. Temporary storms may deter, but they cannot defeat the prosperity of Port Arthur and Sabine unless the citizens and promoters of those energetic towns lose their courage and give up the fight. St. Louis did not lose courage on account of one of the most destructive cyclones of the century. Port Arthur and Sabine will not be discouraged by a stiff breeze and back water.

"At this point the Post suggests that the towns kiss and make up and fight as twins for a better and happier future."

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SEABOARD AIR LINE REPORT.

Increases in Gross Earnings and Surplus for the Year, and Extensive Betterments to the System.

The annual meeting of the Seaboard & Roanoke Railroad Co., which is to be held on October 5 at Portsmouth, Va., is arousing considerable interest in financial circles, owing partly to the contest which it is expected will be made with the view of placing control of the line in the hands of Northern parties. As readers of the Manufacturers' Record are well aware, the Seaboard & Roanoke Railroad Co. is the controlling railroad of the system known as the Seaboard Air Line, since it furnishes the outlet from the system to tidewater. In connection with the Old Bay Line of steamers, operated by the Baltimore Steam Packet Co., it forms a link connecting the territory traversed by the Seaboard Air Line with Baltimore and the North by the way of Chesapeake bay. Prior to the annual meeting of the company in 1896, a number of reports were circulated relative to its financial condition. Most of these reports were from anonymous sources, and were apparently published with the view of influencing security-holders against the management. The attacks, however, proved unsuccessful, and President R. C. Hoffman and Vice-President E. St. John were re-elected.

The Manufacturers' Record has obtained statistics relative to the present condition of the Seaboard Air Line and the Seaboard & Roanoke Company, which are herewith appended. They show a very gratifying increase in the company's revenue and the condition of affairs which will doubtless prove very satisfactory to the various stock and bondholders.

The total receipts of the Seaboard Air Line system from all sources for the year ending June 30, 1897, amounted to \$3,777,641.17. Deducting operating expenses and taxes, a gross income was left of \$1,000,085.88. Deducting from this amount sums paid for leases, also losses of every character and a dividend of \$19,669, there is left for the year a surplus of \$189,842, compared with \$158,976.52 for the preceding year, an increase of \$31,766. For the year ending June 30, 1896, gross earnings from all sources were \$3,528,639, showing that during the past year there has been an increase of \$248,002. The Georgia, Carolina & Northern division of the Seaboard Air Line is leased to the Seaboard & Roanoke and the Raleigh & Gaston companies. The 35 per cent. of gross earnings paid the Georgia, Carolina & Northern under terms of the lease were \$305,364.93—\$37,364.93 more than the interest on its bonds.

This surplus was applied to reducing the debt of the Georgia, Carolina & Northern road to the lessees. The receipts of the Seaboard Air Line Belt Railroad amounted to \$82,786.02, giving a surplus of \$46,600.26.

The report for the Seaboard & Roanoke Railroad Co. for the year shows gross revenue from transportation of \$808,678.38, and a net revenue of \$285,091.15 after deducting operating expenses and taxes. Income from other sources swelled it to \$378,033.95. From this amount a surplus was left for the year of \$55,199.49 after deducting charges of all kinds and a dividend on its preferred stock of 7 per cent. This is

an increase in the surplus for the year of \$31,810, or nearly double the amount reported in the preceding year. The gross revenue shows an increase of about \$60,000 over the preceding year, the gain being contributed by both the freight and passenger departments.

The financial status of the system, as indicated by this report, has not been brought about by neglecting the physical condition of the road or restricting legitimate expenses for maintenance of way and transportation, as several reports show larger appropriations made for these purposes. Nearly \$50,000 more was spent for the maintenance of way during the past year than in 1896, an increase of over 12 per cent., while the increase in the maintenance of equipment amounted to \$20,380.32, or over 9 per cent., making a total of about \$70,000 more than the previous year for these purposes. During the year nearly \$100,000 was expended for additions to the property. This included \$70,000 for terminals at Portsmouth for wharf purposes. Equipment to the extent of \$33,844.49 was secured from car trusts, while the report shows that \$161,996.51 was paid towards equipment already purchased and what are known as the A. B. C. car trusts. In addition to the wharf at Portsmouth, a storehouse, pattern-house, electric plant and other buildings were constructed at this point at a total cost of about \$20,000. The company built fifty-six new freight cars and rebuilt twenty-nine, also six locomotives. A branch line to the Henrietta Cotton Mills was completed and surveys made for another to Roanoke Rapids on the Seaboard & Roanoke section of the system. The new freight station at Atlanta, which has recently been opened, was also completed during the year at a cost of over \$100,000. This is one of the finest buildings of its kind in the country.

These figures indicate that the system is in the hands of a board of officers and directors who combine conservatism with ability and fully appreciate the responsibility of the charge entrusted to them. As a very large amount of the securities of the Seaboard are held by Southern investors, who consider it, as well as the Old Bay Line, a Southern institution, the summary of its year's work herewith given by the Manufacturers' Record will undoubtedly prove deeply interesting to them.

During the year the Seaboard Air Line has been carrying out broad and comprehensive plans for attracting immigrants to that section of the South of which it is the outlet, and has also given its aid to the industrial development of the same section. As a result a large number of settlers have been induced to locate in the vicinity of the Seaboard, and extensive investments of capital have been made and are being made in cotton mills and other manufacturing enterprises.

Important Maryland Lines.

From the present indications the new railroad mileage in the State of Maryland during the next year promises to be considerably increased. The Washington, St. Mary's Bay & Point Lookout Railroad Co., which was referred to in the last issue of the Manufacturers' Record, seems to be making rapid progress. Mr. A. B. Linderman, of Philadelphia, who is president of the company, writes the Manufacturers' Record that the company intends to construct this line immediately, and has already let contracts for the first eighteen miles. Contracts for the balance of the road will be let about January 1. The line is to be laid with 70-pound steel rails, which, according to Mr. Linderman's statement,

have already been contracted for. The company expects to complete the first section from Washington to Brandywine, Md., where its chief engineer, W. T. Forsythe, is at present located, by January 10. This is the company which has made an issue of \$1,250,000 in bonds for the purpose of carrying out the enterprise. Its trustee is the Security Trust & Insurance Co. of Philadelphia.

The line will form what is nearly a direct route down the Potomac river peninsula from Washington to the mouth of the river at Point Lookout. It is understood that from this terminus a steamboat line will be established, so that passengers from Washington may reach Old Point Comfort by rail and water in about six hours. There is also a report that this is to be a Northern extension of an extensive railroad system, which will ultimately be built from Washington to Richmond and points South. The officers of the railroad company, in addition to Mr. Linderman, are J. W. Bancroft, vice-president; H. L. Montgomery, secretary and treasurer, and Hon. Charles L. Brown, general solicitor.

The Washington & Chesapeake Beach Railroad enterprise, which went into the hands of a receiver over a year ago, it is learned, has been revived, and another company formed to complete it. Otto Meares, of Denver, Colo., a well-known railroad promoter, is president of the company; A. H. Dunn, of New York, vice-president. It is understood that Messrs. J. Kennedy Tod & Co., of New York, bankers, are also interested. This firm purchased the property of the company when it was sold by order of the court. The road will be about twenty-eight miles long and form a new line from Washington to Chesapeake bay, where it is understood will be arranged a resort for excursionists. President Meares is quoted as saying that the line will be completed about May 1, 1898.

If these two projects are carried out as planned they will give the city of Washington two additional railroad lines to tidewater, and will add over 100 miles of new railroad to the mileage in Maryland.

Chief Engineer L. H. Hyer, of the Chesapeake Bay Construction Co., of Washington, advises the Manufacturers' Record that this company has secured the contract to build and equip the line between Washington and Chesapeake Beach. The work will be let by the company to sub-contractors directly. The office of the company is corner of 15th and H streets.

C., N. O. & T. P. Annual Report.

The annual report of the Cincinnati, New Orleans & Texas Pacific Railway Co., which has just been made public, shows a surplus of \$5682 remaining after paying rental and operating expenses. During the year the company replaced about 3000 tons of rails with 75-pound steel rails, and calculates to relay the balance of the line, 150 miles, within the next four years. Work is progressing on two large bridges across the Ohio and Cumberland rivers, respectively. The net earnings of the line for the year were \$1,097,325, an increase of about \$58,000 over the preceding year. The total charges, including rentals and interest on accounts, amounted to \$1,091,642, which, after being deducted, leaves the surplus referred to.

Railroad Notes.

B. V. Jackson has been appointed commercial freight agent of the Baltimore & Ohio system at Washington.

H. R. Jackson has been appointed

freight and passenger agent of the Clyde Steamship Line at Charleston, S. C.

Mr. C. H. Holdridge has been appointed port agent of the Ocean Steamship Co. at New York by order of Vice-President Egan, of the railroad.

George L. Filer has been appointed commercial agent of the International & Great Northern Railroad Co., with headquarters at San Antonio, Texas.

A dispatch from New Orleans, La., announces that the Texas & Pacific Railroad Co. has finally decided to have a steamship line in connection with its service to European ports.

The Richmond Locomotive Works has recently secured an order for five consolidated engines for the South Carolina & Georgia Railway Co. They will weigh about seventy-five tons each.

A dispatch from Galveston, Texas, announces that the Anchor Line Steamship Co., which has a fleet of vessels in service between New York and Great Britain, has recently sent one of its ships to Galveston to load cotton, grain and other products for Europe.

The Pennsylvania Steel Co. has been awarded the contract for remodeling the railroad bridge of the Louisville & Nashville Railroad Co. over the Cumberland river at Nashville, Tenn. About 600 tons of steel will be required for the work. The bridge when completed will be about 700 feet long, with a draw-span of 274½ feet.

The report of the Northern Central Railroad for the eight months ending August 31 shows net earnings of \$1,227,134, an increase of \$314,000 over the same period of 1896, or 33½ per cent. The net earnings for the month of August alone show a gain of \$104,000 over the corresponding period of last year, or nearly 75 per cent. increase.

According to a dispatch from Birmingham, Ala., the West Alabama Coal Association has made a contract to supply the Memphis, New Orleans & Cincinnati Packet Co. with 20,000 tons of coal yearly until January, 1889. It is understood that arrangements are being made to sign other contracts which will aggregate 100,000 tons per year. This coal will be shipped by water from Greenville, Miss., by the Southern Railway Co.'s barge lines.

Arrangements are being made by the Hanover Construction Co. to build the necessary depots along the Montgomery & Tuscaloosa division of the Mobile & Ohio Railroad which is now under construction. The buildings will include nineteen passenger and freight depots, two roundhouses, as well as sandhouses, oil-houses, etc. The stations at Montgomery and Tuscaloosa will be larger than the others. Nine water stations will also be erected and twenty sets of section-houses.

Clays in Georgia.

Rufus A. Connell, of Whigham, Ga., writes to the Manufacturers' Record that within four miles of Whigham are large deposits of fuller's earth of commercial value, and also deposits of potters' clay and fire-brick clay. Within six miles of the place are phosphates, building stone, lime and sand for glassware.

The American Protective Tariff League has just issued another and very complete edition of our tariff laws. This volume of 144 pages gives the official text of the Dingley tariff, complete comparison of the Dingley and Wilson law, and index to all articles covered by the new tariff. The book will be of great value for reference and for answering all questions regarding the tariff question.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

THE PRICE OF COTTON.

Col. Alfred B. Shepperson Takes a Hopeful View.

Under date of September 23, Col. Alfred B. Shepperson, of New York, the well-known authority on cotton, writes in Textile America an important article explaining why cotton has not advanced. He contends that the September receipts cannot be safely taken as a criterion by which to estimate the extent of the crop, as large receipts indicate only early maturity of the crop. The favorable accounts previous to September 1 and the liberal receipts since then have caused American and European spinners to buy as sparingly as possible, in the hope of lower prices when stocks increased. Cotton was too high for goods, and the price of raw material had to decline. At this particular time, says Colonel Shepperson, there seems to exist an earnest desire on the part of the South to part with its cotton quickly and without regard to declining prices, coincident with an indisposition on the part of American and European spinners to buy except for immediate wants. He thinks that spinners can now manufacture it at a fair profit, and adds:

"The spinner who buys at present prices and in case of further decline follows the market down, will probably not have cause to regret such action, for he will have obtained his supplies of a raw material (which loses nothing of its value by being kept) at a price far below the average for many years. Those who wait for lower prices in their anxiety to secure their cotton at the very 'bottom' may find their plans upset by sudden and severe frosts and be compelled to pay well for their cotton—and experience. The crop is far from being secured. Its extent and its quality will largely depend upon the weather during the next six or seven weeks. Frosts will reduce the yield and frosts and rain will injure the quality. The present receipts are excellent both as to quality and staple, and spinners need not be afraid to buy it and put it away, for there are far worse investments than actual cotton of good grade and staple at present prices. Those who entertain the idea that cotton will fall to the low prices of the season of 1894-95 are hugging a vain delusion. The conditions are essentially different, and I never expect again to see middling cotton sell in New York for 5-9-16 cents, which was the price in November, 1894, and in March, 1895. It is well to remember that in April, 1895, it had advanced nearly one and a-half cents, and in May advanced three-eighths cent more, making an advance of nearly two cents in two months. Exactly this state of things may occur again if prices are forced too low during the present depression."

Mr. E. P. Horner, of the St. Louis Cotton Exchange, in an interview with the St. Louis Republic, explained the situation as follows:

"The cause of the low prices that have ruled for some time past was, primarily, the prospects of a tremendous yield, the

indications up to a few weeks ago being that we would have the largest crop in the history of the country. Other factors have entered into the situation, such as the buyers holding off on account of the large crop prospects, and there being more sellers than buyers, and now comes the yellow fever.

"The prospects of the large yield predicted up to about a month ago will not be realized on account of the dry, hot weather damaging the crop from 20 to 50 per cent. in many sections, and yet the market continues to decline. It is hard to say just what is the cause of the bearish tendency of the market, in the face of the continued reports of crop damage, but there is no disputing the fact that it is going down, and that the planters are the losers."

From other cotton men it was learned that one of the principal reasons for the decline is the shortage of the food supply in Europe. The United Kingdom and the Continent taking from five to seven-eighths of the American cotton crop, and the fact that they have to pay such high prices for their food supply, is thought to have had the effect of curtailing the demand for cotton.

Covering Cotton with Southern-Made Duck.

The Nashville American, in referring to some experiments made by the American Cotton Co. in using a covering made at Columbia, S. C., for its round bales, says:

"The American Cotton Co. made experiments covering several bales of round cotton with 68-inch cotton cloth, weighing fifteen ounces per yard. The tare on these bales will not exceed three pounds per bale. The cloth proved strong enough and makes a good substantial covering. The cost of this covering will not exceed thirty cents per bale, and the strong argument in favor of using it is that it is made in the South and can be used again for other purposes, and, besides, it will do away with, if adopted (as it can be to great profit), the troublesome question of tariff duties on India jute bagging and imported Liverpool iron and steel ties.

"The bale is properly placarded, 'No tare, no tariff, no bagging, no ties, all cotton.' Visitors are carried away with this wonderful revolution in the cotton industry. The showing of great savings grow day by day, as is proven by actual results. The company is sticking to their standard 425-pound bale, not because it is to their benefit. Quite to the contrary, for they turned out a bale at one of their plants in Texas recently weighing 700 pounds, with a density of a fraction over forty pounds to the cubic foot. But these large packages, they claim, are not only inconvenient to handle, but they are an injustice to labor. The 425-pound bales are made to conform to the strength of a man, and all railroad laboring men hail this change with approval.

"Some of the most prominent advocates of this new system, and foremost among them, Mr. Stephen A. Knight, of Providence, R. I., have urged the company not to increase the weight of the covering of cotton. The results of these tests are phenomenal when it is considered that the old box bale has to be 'tared' twenty-five pounds per bale. The weight of the bale of cotton is also approved by the manufacturers, and both the four-foot length and weight of their standard bale was suggested and urged by one of the most prominent railroad men in the Southern cotton country."

Southern Textile School.

The trustees of Clemson College, South Carolina, are considering the practicability of establishing a textile de-

partment at the college in accordance with a suggestion made by Mr. D. A. Tompkins, of Charlotte. In his letter on the subject Mr. Tompkins said:

"In the manufacture of cotton the field is probably still greater, and the importance of extending among the youth of the State knowledge of the textile art could hardly be properly estimated. Up to the present time the product of the factories of your State has been chiefly plain white cloth. Simple as the manufacture of this cloth is, it has been necessary to employ many men from other sections of the country to conduct these operations in South Carolina, while in many cases the young graduates of your State institutions, being untaught and unskilled in the textile art, have been compelled to go North or West to find employment in lines where their education and training in your schools is more applicable. It is notable also that those young men who want to go into some line of textile manufacture do not consider any Southern school, but go North either to a school or into the shops, or in some engineer's office."

It is believed that neither Clemson College nor the Agricultural and Mechanical College at Raleigh, N. C., would do amiss in adopting Mr. Tompkins's suggestion.

Georgia's First Round Bale.

The first cylindrical cotton bale from the large press just erected at De Soto, near Americus, Ga., was sent to that city last week, and was regarded with considerable interest by cotton warehousemen and dealers. The bale is four feet in length and eighteen inches in diameter, weighing 384 pounds. Mr. Blossengame, the manager for the De Soto Plantation Co., owner of the press, stated that this bale was rather an imperfect one, the machinery not having been evenly adjusted, but that hereafter the bale would be well formed and of standard weight. A light cloth covering was stitched about the bale. No ties or heavy bagging is used, the heavy steel rollers pressing the cotton so compactly as to render this old method of binding wholly unnecessary.

The bale is quite a curiosity, says a dispatch from Americus, and cotton men are willing to concede all the advantages claimed for it. It is claimed that 200 bales from a cylindrical press can be loaded upon a car, as against sixty-five as now compressed. The bale comes ginned, packed and pressed directly from the cotton gin, thus saving a vast amount in handling and pressing as required by the present method.

Another Good Record.

The annual meeting of the directors of the Huntsville Cotton Mill, of Huntsville, Ala., was held on September 24. The business for the past year was found to be most satisfactory. A dividend of 8 per cent. was declared out of the net earnings, and a good amount was placed to the surplus fund. This property has been a splendid paying investment from the start. The old board of officers was re-elected as follows: S. H. Moore, president; J. R. Jones, secretary; Luke Matthews, treasurer and superintendent. For directors, W. W. Garth, A. S. Fletcher, Luke Matthews, J. R. Jones, R. E. Spragins, S. H. Moore, G. M. Harris, R. L. Pulley and W. M. Holding.

Cotton in Sight.

The report of Secretary Hester, of the New Orleans Cotton Exchange, for the period from September 1 to September 24 shows 748,473 bales in sight, against 916,632 for the same time in 1896. The receipts at ports since September 1 were

531,613, against 662,391; overland to mills and Canada, 12,862, against 31,168; interior stocks in excess of September 1, 126,941, against 149,516, and Southern mill takings, less consumed at Southern ports included in port receipts, 77,057, against 73,557.

New Hosiery-Yarn Mill.

The Cedartown Co., of Cedartown, Ga., is about to build a hosiery-yarn mill of about 7500 spindles capacity.

The location for the new plant has not as yet been definitely determined, and investigations are now being made regarding same. Information can be obtained by addressing the Cedartown Co., 119 South Fourth street, Philadelphia, Pa.

Textile Notes.

Mr. R. T. Fewell, of Rock Hill, S. C., has been appointed receiver of the Catawba and Chester Cotton Mill, of Chester, S. C., upon motion of the D. A. Tompkins Co., of Charlotte, N. C.

The Patterson Manufacturing Co., of China Grove, N. C., has decided to build a warehouse 30x40 feet in dimension, in order to make room for four new spinning frames which have been purchased.

The proposed cotton mill at Lodi, Texas, recently referred to, is projected by Mr. W. C. Jones, who hopes to announce definite particulars soon. The plant is proposed to be built on the co-operative plan at a cost of about \$50,000.

The Farmers' Alliance has formulated plans for the organization of the proposed cotton-mill company. A committee, consisting of R. A. High, James Garity, J. G. Willis, C. H. Allyn, T. B. Roberts and Jas. L. Autry, has the matter in charge.

Messrs. J. S. Spencer, W. E. Holt and C. W. Johnson, of Charlotte, N. C., have purchased the Virgin Cotton Mill at Huntersville, N. C. The new owners intend to remodel the mill and change it into a spinning plant. Considerable machinery will be put in.

The Red Bluff Cotton Mills, of Bennettsville, S. C., reported recently as incorporated, has organized, with Alex. McRae, president; J. N. Maloney, secretary-treasurer, and directors Alex. McRae, J. A. Smith, J. A. Pinchback, J. N. Maloney and Frank McRae. Company's mill is now being erected, as previously stated.

The Coosa Manufacturing Co., of Piedmont, Ala., has purchased the 5168-spindle mill of the Barlow & Thatcher Spinning Co., at Henry Clay, Del., and will remove machinery of same to the Piedmont mill. This will give the Coosa Company a total of 15,408 spindles. A new boiler will be installed to furnish additional power, and a belt-tightener will be purchased. The company's product is warps and yarns.

In the last issue of the Manufacturers' Record reference was made to a proposed power-plant at Muscle Shoals on the Tennessee river. In the article the city of Anniston was referred to inadvertently. It should have been Sheffield, which is situated at the head of navigation on the Tennessee river and at the foot of the shoals.

The Southern Hollowware & Foundry Co., which is about to begin operations at Chattanooga, Tenn., is composed of negroes. The company expects to give employment to about fifty colored men when running full time. It will make stoves, also do piece work for other concerns in the vicinity. C. H. Farren is president of the company.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed Oil in Tinplate Manufacture

Gas City, Ind., September 25.

Editor Manufacturers' Record:

Knowing your devotion to the interest of the South, I should like to call your attention to the possibilities of cotton oil in the tinplate industry. I believe that cotton oil can take the place of palm oil in the manufacture of tinplate. In 1896 we imported into the United States more than \$6,000,000 worth of palm oil. The figures will be higher for 1897.

J. M. BEAVO.

The Market for Cottonseed Products.

New York, N. Y., September 28.

The market for cotton oil is weak, and in the absence of a demand, coupled with the presence of new crop oil at this point, it is possible that a further decline in prices may occur. The situation is summed up in the fact that buyers refuse to bid, thus depriving the market of support. Probably the anxiety displayed by speculators to realize on holdings secured during the late upward movement has contributed most to the present attitude of the market. Prime summer yellow has been sold at 24 cents, although 24½ cents is quoted at this writing. This is a serious drop from the prices quoted a week ago, and it cannot be denied that the decline has been a surprise to the entire trade. The yellow-fever scare, a declining lard and tallow market, together with advancing ocean freight rates, have conjointly brought about the present unsatisfactory market conditions. The increased offerings from the South at this special time could scarcely be more inopportune, and exporters have taken advantage of the situation in some instances with regard to future deliveries. Lard has declined, due rather to speculative views on the part of packers than to other causes, 4.65 cents being quoted for January delivery Chicago. Tallow has also declined, due to the slow demand and corresponding accumulations, 3½ cents being the quotation. Owing to the belief that lower prices will prevail as the season advances, prime crude is very difficult of sale; the best bid for loose, Atlantic States, is 16½ cents. That the comparative scarcity of cotton oil abroad is more emphasized is recognized, and the prospect of higher prices would appear to depend upon whether the necessities of buyers or sellers is the more urgent. If sellers can hold stocks until further postponement of securing supplies would mean absolute inconvenience as well as loss, with regard to the home and export trades, there can be no question about results. Cotton oil in England is strong, and in view of the high prices for seed and good demand for cake, still further improvement is expected. Exports for the week aggregate 3450 barrels, while receipts were 1950. The following are closing prices: Prime summer white, nominally quoted at 27 to 27½ cents; butter oil, 26 to 27 cents; prime summer yellow, 24½ to 25 cents; off summer yellow, 24 to 24½ cents; prime crude, 21 cents; off crude, 19 to 20 cents; prime crude, loose, 16½ to 17½, and soap stock 5½c.

Cake and Meal.—Enquiries from abroad continue, and at this time representatives of the largest purchasers of cotton cake and meal in the United Kingdom are now in this country for the purpose of securing supplies for the forthcoming season. Mr. J. H. Bowman, of

the well-known Liverpool importing house of G. C. Dobell & Co., and Mr. Wm. Norman, of Norman & Piggott, of the same city, arrived in this city during the week, and have started on their tour through the South and West visiting the cotton and linseed oilcake mills. The cake market is strong in the United Kingdom, prime being quoted at £5 17s. 6d. to £6 2s. Liverpool.

Cottonseed-Oil Notes.

The Floresville Oil & Manufacturing Co., Floresville, Texas, filed an amendment last week to its charter, increasing the capital stock from \$10,000 to \$35,000.

The Love Improved Gin Co., of Chester, S. C., it is stated, will shortly increase its capital and add a cottonseed-oil mill and other improvements to its extensive plant.

The National Cotton Oil Mill plant, at Dennison, Texas, having arranged the question of wages with its workmen, started up their mill on the 20th ult. with a portion of the old force supplemented by new men.

After being shut down for several weeks, the Sumter Cotton Oil Mill, of Sumter, S. C., resumed operations on the 21st inst. The capacity of the mill has been increased from thirty to fifty tons since last year.

A charter was granted last week to the Brownwood Oil Mill Co., doing business at Brownwood and Fort Worth, Texas. The capital stock of the company is placed at \$50,000. The incorporators are W. E. Scott, E. B. Harrold and Robert McGart.

The market in Texas for cottonseed oil has been weak and lower during the past week, and mills have made a slight reduction in quotations. The Houston Post has the following market report, f. o. b. mill Texas interior points, according to location: Prime crude oil, loose, 17½ to 18 cents; refined butter oil, loose, 21 to 21½ cents, and prime summer yellow oil, 20 to 20½ cents; prime cottonseed cake, \$15 to \$16.50, and prime cottonseed meal, \$15.25 to \$16.75 per short ton. Market dull for oil, and firm, with a good demand, for meal and cake.

In New Orleans the market for cottonseed products is quiet, with values easy for oil and steady for meal and cake. Receivers' prices are quoted as follows: Cottonseed, \$8 per ton of 2000 pounds net to the mills, no commission of any kind to be added; cottonseed meal jobbing per carload at depot, \$18.50 to \$18.75 per short ton of 2000 pounds; for export per long ton of 2240 f. o. b., \$20.25 to \$20.50; oilcake for export, \$20.25 to \$20.50 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, strictly prime in barrels per gallon, 19½ to 20 cents; loose, per gallon, 17 to 17½ cents, according to location of mill; refined cottonseed oil, prime in barrels per gallon at wholesale or for shipment, 23½ cents; cottonseed hulls delivered per 100 pounds, according to location of mill, 10 to 15 cents; linters, according to style and staple—A, 3¼ cents; B, 3½ cents; C, 2½ to 3 cents; ashes, none.

The announcement of the Gunton Institute for 1897-98 has been issued. The executive officers of the institute have been moved to the building No. 41 Union Square, New York, where Gunton's Magazine is also housed. The announcement sets out the courses of lectures and studies, enumerates the books that it is required to read, or that are recommended to students, and details the method by which the local centres of the institute are formed in different localities, whether in Massachusetts, or Alabama, or California.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., September 30.

In the local phosphate market there is a moderate volume of business, and the tone is steady, in sympathy with the improvement in other fertilizer ingredients. Manufacturers are considerable buyers in small lots for present necessities. Reports from mining sections are unchanged, and the work of development is being pursued with caution in most cases. In South Carolina among the river miners the output is limited to the demand. The market is nominally steady, with prices unchanged. Crude rock at the mines is quoted at \$3, hot-air-dried \$3.25 f. o. b. vessel in Ashley river and \$3.45 f. o. b. city. Florida miners are generally busy, especially in the pebble districts, and shipments from the ports during the month of September will be somewhat larger than usual. Prices are nominally steady, with holders firm and not disposed to make concessions. In the Tennessee phosphate field the work of development is being actively pursued, the shipments from Mt. Pleasant being over 6000 tons in August. In the local market there are no charters reported for the week. In New York the business in phosphate charters is limited, very few being reported. The Susie H. Davidson, 482 tons, was taken last week to load at Philadelphia with coal for Charleston, S. C., and back with phosphate rock to Elizabethport, N. J., on private terms, and the schooner Gen. A. Ames, 452 tons, from New York to Baltimore with fertilizer at 85 cents.

Fertilizer Ingredients.

The tone of the market for ammoniates is quiet, with values firm at the close. Messrs. Thomas H. White & Co., in their circular for September, say: "The first half of the past month gave evidence of further strong inquiry for ammoniates from Southern buyers. Prices were advanced to the basis of our quotations below, and fewer transactions have resulted since. The decline in cotton operates as a serious check upon business from that section. Eastern manufacturers refuse to consider the extreme views of Western holders, and we look for some recession in prices. The usual contracts of high-grade tankage are now offered for six and twelve months from November 1. Sellers' views are from \$16.50 to \$17.50 f. o. b. Chicago, but we do not learn of any bids within that range."

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	\$2 25 @
Nitrate of soda	1 77½ @
Blood	2 30 @
Hoof meal	1 35 @
Azotine (beef)	2 00 @
Azotine (pork)	2 00 @
Tankage (concentrated)	1 90 @
Tankage (9 and 20)	2 00 @ 10
Tankage (7 and 30)	17 00 @ 18 00
Fish (dry)	20 00 @
Fish (acid)	12 00 @

Phosphate and Fertilizer Notes.

The schooner Oscar C. Schmidt cleared last week from Charleston, S. C., for Boston with a cargo of 750 tons of phosphate rock.

The shipments of phosphate rock from the Mt. Pleasant district in Tennessee during the month of August amounted to 6013 tons, all domestic.

The J. E. Graham Fertilizer Works, at Staunton, Va., were destroyed by fire last week. There was but little stock on hand, so that the loss will amount only to \$2000.

Messrs. J. F. Minis & Co., of Savannah, Ga., cleared the steamship Murcia last week from that port for Bremen

and Hamburg with 1987½ tons of Florida phosphate rock for the latter port, valued at \$19,875.

The commissioner of agriculture, R. T. Nesbitt, for the State of Georgia in his annual report shows that the sale of fertilizers for the fiscal year just closed amounts to 402,110.10 tons, against 335,617.80 tons for 1895-96 and 226,532.20 tons for 1894-95.

A charter was granted last week to the Florida Kaolin & Manufacturing Co., of Jacksonville, Fla. The capital stock of the company is fixed at \$3,000,000. The names of the incorporators are Edwin J. Houston, Arlington Hobbs and Howell L. Lloyd, all of Philadelphia, Pa.

The British steamship Hexham, which cleared on the 16th ult. from Punta Gorda for Hamburg with a cargo of phosphate, was towed into Hampton Roads on the 26th ult. broken down and cargo shifted. She will be taken to Newport News to have her machinery repaired.

The phosphate shipments from Fernandina, Fla., for the present month will be of considerable volume. The arrivals on the 20th were the Norwegian steamship Nodkyn to load phosphate rock for C. E. Abson, and the British steamship Rochampton to load phosphate rock for A. Neuman.

The new fertilizer factory at Birmingham, Ala., is nearing completion, and will commence operations next week. The plant, when completed, will represent an investment of \$60,000, and will have a capacity of 16,000 tons. The company will manufacture all grades of fertilizers, and this season will confine its field principally to the State of Alabama and a portion of Mississippi.

The domestic shipments of phosphate rock from the port of Charleston, S. C., from September 1 to 24, inclusive, amounted to 2518 tons, against 8815 tons for the same time last year. It is stated that the river-rock industry of the State is being kept well in hand, and although the output is not so large as formerly, the companies are mining about 10,000 tons a month. Stock in the river section already mined amounts to about 25,000 tons.

The following vessels cleared last week from Jacksonville, Fla., with cargoes of lumber and other wood products: Schooner Robert W. Dasey for Philadelphia with 272,000 feet of yellow-pine lumber; schooner W. H. Skinner for Newark, N. J., with 210,000 feet; steamship Delaware for Boston with 200,000 feet of lumber and 1000 bundles of shingles; steamship Comanche for New York with 307,431 feet of lumber, 4500 railroad ties and 6500 bundles of shingles, and the steamship Iroquois for the same port with 150,000 feet of lumber, 2000 railroad ties and 1000 bundles of shingles.

A meeting of the American Forestry Association was held at Nashville, Tenn., on the 22d inst. Among the papers read were the following: J. D. W. French, of Boston, upon "American Forests and Their Utter Lack of Protection;" G. D. Sudworth upon "The Cedar Groves of Middle Tennessee;" Colonel Killebrew upon "The Forests of Tennessee;" Dr. C. A. Schenk, of Baltimore, spoke in favor of financial forestry, and Secretary Whittlesey, of Washington, read a paper by H. A. Hazen, of the Weather Bureau, entitled "Forest and Rainfall." Invitations to meet next in Tampa, Fla., Omaha, Neb., and Boston, Mass., were referred to the executive committee. The meeting adjourned sine die.

MECHANICAL.

A Mammoth Drawing Press.

The mammoth toggle drawing press shown in the accompanying cut illustrates a machine designed by the E. W. Bliss Co., 137 Plymouth street, Brooklyn, N. Y., to meet the requirements of the manufacturers of very deep and heavy drawn goods, including the largest and heaviest kind of enameled ironware, tinware, copper goods, sheet steel and iron goods, etc. Among the articles which can be drawn on it are steel sinks, locomotive headlight reflectors, wheelbarrows, stove tops, large trays and

powerful friction clutch and brake. The slides can be instantly stopped, started or held at any point of the stroke. The press is generally made with engine attached, as shown in cut, which insures greater simplicity and compactness of the power connections and more perfect control and independence of action. It can, however, be furnished without engine if desired. An idea of the size of machine may be had by a few of the principal dimensions:

Width between uprights, 54 inches; largest blank, 53½ inches in diameter; largest punch, 41 inches in diameter; will draw in depth up to 10½ inches; size of main gear (diameter and face), 95x12

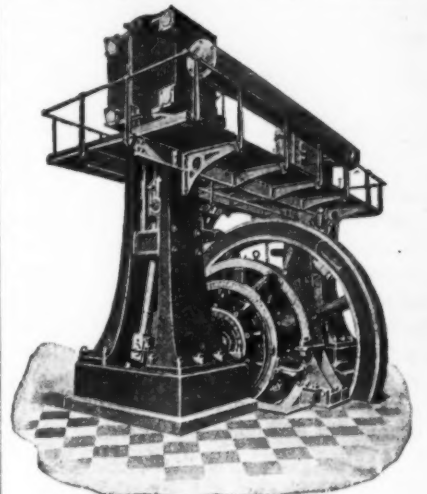
journal, 12 inches; length of main journal, 24 inches; diameter of main shaft at wheel seat and generator, 16 inches; diameter crank-pin, 6 inches; length crank-pin, 7 inches; connecting rod length, 7 feet 6 inches; connecting rod diameter in centre, 5½ inches; piston rod diameter, 4 inches; surface each of the four crosshead slippers, 180 square inches; throttle valve diameter, 8 inches; fly-wheel diameter, 16 feet; weight of fly-wheel, 50,000 pounds.

This engine runs 100 revolutions per minute with a boiler steam-gauge pressure of 130 pounds.

Its usual load is about 700 horsepower, but at times will indicate 850

either oil or water from injuring the generator.

These engines are built by the Philadelphia Engineering Works, of Mifflin and Meadow streets, Philadelphia, Pa.



VERTICAL COMPOUND ENGINE.

Philadelphia Engineering Works, of Mifflin and Meadow streets, Philadelphia, Pa.

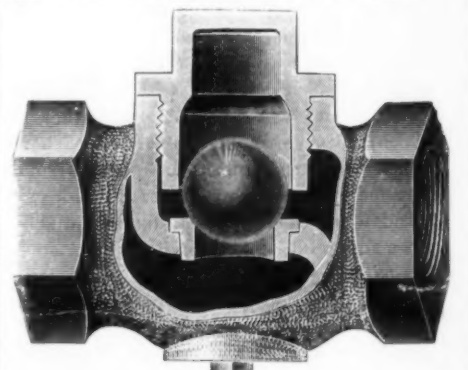
Check Valve.

This check valve is claimed to be a departure from the ordinary brass body ball check heretofore made in the respect that the body of the valve is of iron, extra heavy, which gives stiffness and avoids the pounding down of the web, as often occurs in the use of brass bodies.

The seat and ball are of bronze, and the seat can be removed from and replaced in the body of the valve without removing the valve from pipe connections.

The bronze balls are guaranteed perfect spheres, and are accurately fitted (ground in) to the seats. The action of the perfectly true ball keeps the seat true and tight.

The cap (which is of the best steam metal) is provided with an extra large square for wrench, and upon the inside



CHECK VALVE.

has a shoulder, upon which is formed an accurate seat for the ball, the same as the seat in the web, thus protecting the ball from any damage by striking the cap. The valve is especially adapted for use on boiler feed line or in hot fluids.

The valve is supplied in a number of sizes, including vertical valves.

These valves have been used, the maker claims, under pressure of 2200 pounds without a leak.

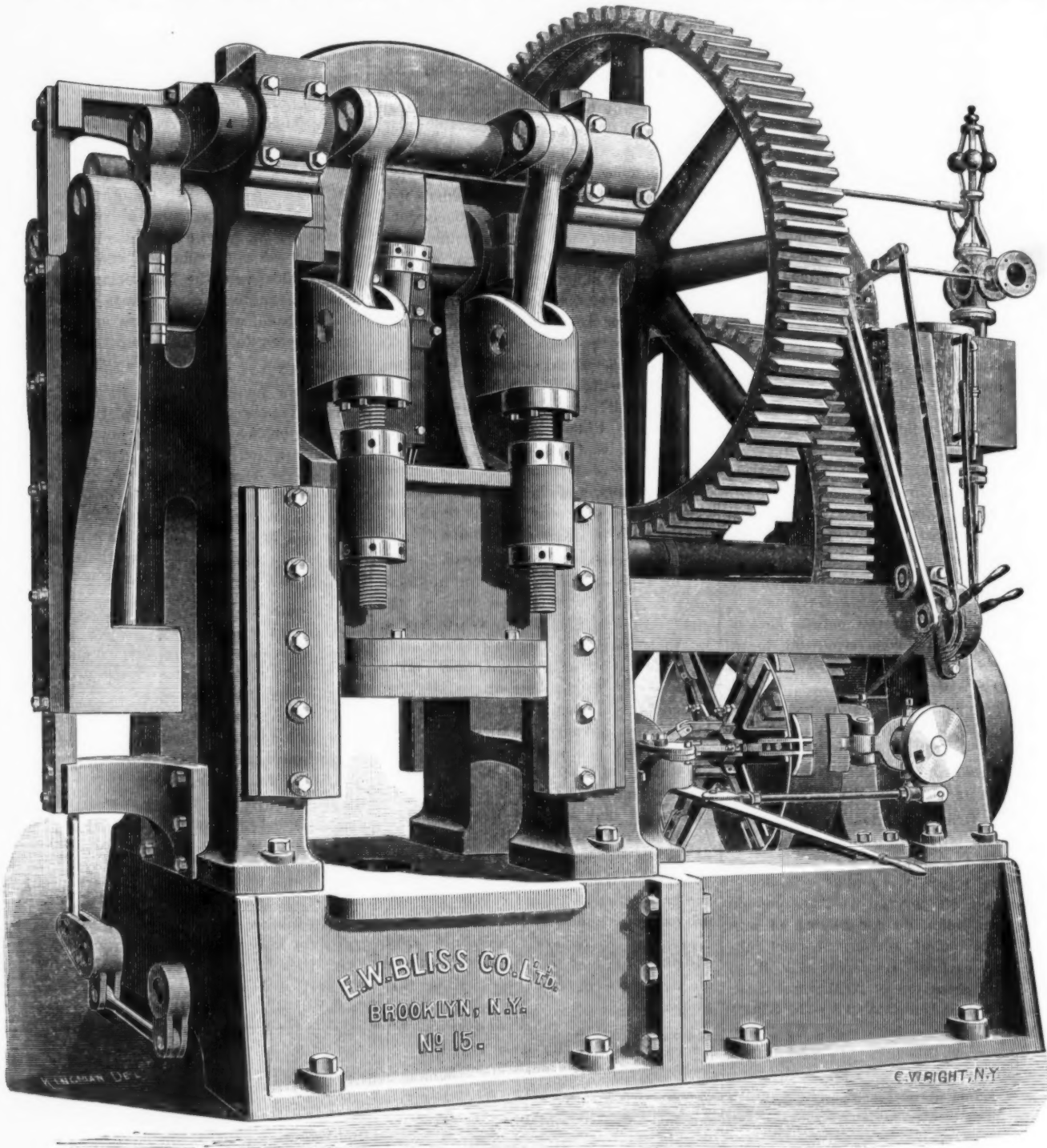
The valves are provided with drip-plugs, enabling the valve or line to be drained whenever desired.

For further information write to the manufacturer, the Darling Pump & Manufacturing Co., Limited, of Williamsport, Pa.

Steam Trap.

The steam trap illustrated is especially designed for steam pressures of 150 pounds, and even higher. The figure shown is a vertical cross section through the receiving and discharge pipes and valves.

In construction this trap has an outer flanged and ribbed shell covered by a flanged top or bonnet, being firmly



A MAMMOTH TOGGLE DRAWING PRESS.

many other articles of large dimensions.

This press is said to be much more compact and substantial than presses hitherto put on the market for similar work—more easily adjusted and operated, with less expenditure of power. The wear is reduced to a minimum through the application of the toggle mechanism, which also insures a more perfect dwell of the blank-holder. The standards are connected with the die-bed below and a heavy top brace above by means of four five-inch steel bolts, which take the main stress of the press action, thus relieving the cast-iron parts of the frame from all tensile strain. The movements of this press are under perfect control through the hand-lever shown, which actuates a

inches; extreme height to top of gear, 174 inches; floor space over all, 16x8 feet; total weight about 150,000 pounds.

The Bliss Company manufactures many different styles of presses for all kinds of sheet metal work.

Vertical Compound Engine.

The vertical cross compound engine shown was erected at the works of the Western Electric Co., Chicago, Ill., and from it is distributed power to the different line shafts over the company's building. The principal dimensions of the engine are as follows: Diameter high pressure steam cylinder, 22 inches; diameter low pressure steam cylinder, 34 inches; common stroke, 36 inches; diameter main

horse-power. It has been in operation since last June.

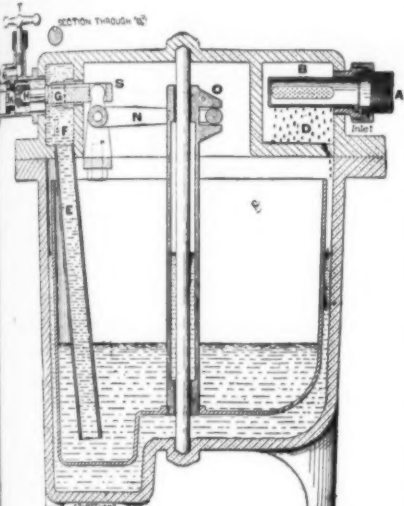
It will be observed that the dimensions of these cylinders are for non-condensing compound. These engines, however, are built for condensing compound by simply changing the proportion of the cylinders, as may be required for the steam pressure and power.

The governor is positively driven.

The generator is a 400-kilowatt of the Western Electric Co.'s own construction, and, as noted, exceeds its normal duty to a great extent.

The form of these engines is especially designed for direct-connected work, as the inside of the frame (not shown in the drawing) is entirely closed, preventing

bolted to the shell. This outer shell contains an open top bucket, used as a float, and is enough shorter than the outer shell that it may move up and down through several inches of space. It will be seen that the condensed water enters the trap first through the inlet pipe marked (A), and is shown on the right-hand side of the trap, and in the continuation of this pipe is the perforated strainer (B), preventing the dirt from entering the trap proper. The strainer can readily be removed for cleaning by simply removing the union nut, as will be seen. The water, after leaving the strainer, enters the small chamber (D) formed in the top casing, and from the chamber (D) it runs through the opening in the space between the inner bucket and the outer shell, and the water entering will first float the bucket up to its highest position, and in doing so will carry with it the guide sleeve (O), having the jaws on its upper end for receiving one of the ends of the bell crank lever (N); the other end of this lever connects through a slotted opening with one end



CROSS SECTION OF STEAM TRAP.

of the guided valve stem (G), having the removable valve (H) attached to its opposite end that is made to seat on the removable valve seat (K), and when the bucket has been floated to its highest position the valve (H) will press hard on the valve seat (K), the water will continue to run in, and when the bucket is up in its highest position the water will overflow and fall into the inside of the bucket, and when there has enough water been received to seal or cover the lower end of the pipe, the pressure of steam in the trap on the water will force a part of the water from the outside of the bucket as well as some from the bucket up into the tank (B), a part of the water passing through the pipe (C) as well as (A) after the tank (B) is filled, the water will continue to run into the bucket until such time that it has received enough to overcome the buoyancy of the water acting on the outside of the bucket. It will then commence to drop, and owing to some lost motion in slotted end of valve stem (G) it will not move the valve (H) from its seat until the bucket has fallen at least one inch, and as the bucket sinks, all the water that was below the bucket falls into it, or is above it, and by the time the lost motion is taken up on the bell crank lever through the falling of the bucket, the full weight of the bucket and its connections, less their weight in water, will hang on the long end of the lever, and this weight is enough to overcome the pressure on the valve and cause the bucket to drop to its lowest position and open at the same instant the discharge valve to its fullest opening. The water will then be forced out of the bucket through the discharge pipe (E) into the chamber (F), and through the valve seat

(K), and finally through the disc (L), having the small hole in it, and the union connection, to be conveyed to a tank, or any desired place. After there has a certain amount of the water been discharged from the bucket, the water acting on the outside of the bucket will cause the bucket to be floated upwards. It will not, however, raise a great distance, owing to the smallness of the space between the bucket and the outer shell; as this space is just enough to have it move freely without friction, it does not contain much water, and after the bucket has made this first slight movement upwards it will then remain in that position until there has enough water been removed to uncover the lower end of the pipe. This will then allow the steam to enter the tank (B) at its upper side, and the entering of the steam into the tank (B) will cause the pressures to be equalized between the tank (B) and the body of the trap (S). The water will then begin to flow out of the tank (B) through the pipe (C) into the space between the bucket and outer shell. This will at once cause the bucket to be floated upwards and close the discharge opening. The water from the coils has, in the meantime, been flowing in through the inlet in its regular way, and it will continue to go on as before described, first filling the inner space, then partially filling the bucket, and then the tank (B), and finally the bucket, causing it to drop and repeat its operation.

This trap has another good feature in the way of removing the air. The air relief is on the top of the discharge valve body, and is seen in section. In this sectional figure the valve (H) is shown away from its seat, or partially open. When this valve is on its seat there will be a small opening made by a groove in the valve stem (G). This groove is shown in a small section just above the top of the cut. This opening is entirely closed when the valve is opened full, as the end of the groove is pulled inside of the guiding sleeve and is shut off in this way. So, when the valve (H) is on its seat there will be a small opening between the space in the trap body and the discharging chamber (F), and when a trap is air-bound the discharge valve is always on its seat, and in this case there will be direct air relief by opening the air valve (T) for a few seconds, the air passing through the passage (M). The other advantage in having this opening, if there happened to be only a small amount of condensation coming, and the valve was not operated for hours at a time, steam would be around the discharge valve instead of water, and the expanded atom of water requires a larger orifice to escape through than the atom of water, and in our twenty-six years' experience directly with this class of work, we have always found that steam valves remained tight and lasted longer than the ones used under a pressure of water.

These traps are interchangeable, so at any time any part necessary can be renewed. And attention is called to the simple manner in which the valve (H) and its seat can be removed and renewed by unscrewing the union nut that connects the discharge pipe to the discharge valve body, then pull out the reducing disc (L) and insert a flat piece of iron, to form a wrench, in the slot cast into the back of the valve seat (K), and unscrew it from the body, then remove the two nuts from the standing bolts, and the valve body can be removed by hand. This will leave the valve stem, having the valve (H) attached to it, projecting out beyond the bonnet casting, so that the valve (H) can be readily removed, and, if necessary, the different parts re-

newed and assembled together again in a few minutes, and at a slight cost.

This trap is specially adapted for use on steam-jacketed cylinders, steam separators, steam pipes to engines and pumps, dryers in cotton, woolen and paper mills, brewers' kettles, evaporating and vacuum pans, dry-kilns in lumber and brick-yards, and steam-heating apparatus in general using high pressures.

For pressures under 100 pounds, or, if it is desired to return the condensed water automatically back into the boiler under pressure, send for particulars to the maker, the Albany Steam Trap Co., of Albany, N. Y.

Iron Markets.

Cincinnati, Ohio, September 25.

It was thought by some that the advance in Southern iron reported about ten days ago would result in a temporary lull at least and the buying movement would be checked. Instead of this, contracts were made freely at a higher range of values, and early in this week it became necessary for the Southern producers to make a further advance of twenty-five cents per ton on nearly all grades, because of the overloaded condition of their order books and the difficulty of taking care of contracts already accepted. There has been a fair tonnage of small orders booked on the present schedule, but the large transactions of the week were on previous basis. Our last week's report showed the interest manifested by Mahoning valley rolling mills in Southern iron, and an order for 10,000 tons gray forge was placed on basis of \$6.75, Birmingham.

One of the Ohio pipe works bought 3000 tons of Northern No. 3 at an advance of fifty cents per ton over their previous purchase, and another pipe company has been negotiating for a round lot to be delivered during the first six months of next year.

There is no speculative inquiry unless the efforts of consumers to cover for future wants is so considered.

In Northern irons there have been a few important transactions with rolling mills, and quotations have advanced to a point where some of the consumers say that it will be better for them to put furnaces in blast and make the iron rather than to buy it outside.

The week closes with everyone in a cheerful mood. Consumers of iron report that orders are more frequent, their output is increasing somewhat, and they are perfectly willing to have the price of pig iron advance if the finished product will follow.

We quote cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry...	\$10 00
Southern coke No. 2 foundry...	9 75
Southern coke No. 3 foundry...	9 45
Southern coke, gray forge...	9 25
Southern coke, mottled...	9 00
Southern coke No. 1 soft...	10 00
Southern coke No. 2 soft...	9 75
Belfont coke No. 1, Lake Sup.	11 00
Belfont coke No. 2, Lake Sup.	10 50
Hanging Rock charcoal No. 1...	14 50
Tennessee charcoal No. 1...	12 50
Jackson Co. silvery No. 1...	12 50
Standard Georgia car-wheel...	14 25

We quote cash f. o. b. New York:

No. 1 X standard Alabama...	\$11 00	\$11 25
No. 2 X standard Alabama...	10 50	10 75
No. 1 X lake ore coke iron...	12 50	12 75
No. 2 X lake ore coke iron...	12 00	12 25
Niagara coke malleable...	12 00	12 25
Standard Georgia charcoal...	15 50	

Philadelphia, Pa., September 25.

Without much excitement the iron market continues on its upward way.

A fair volume of business is transacted daily and prices gradually harden and advance. Several contracts of importance have been closed and others are pending.

We quote for cash f. o. b. Philadelphia:

No. 1 X standard Alabama...	\$11 50
No. 2 X standard Alabama...	11 00
No. 1 X lake ore coke iron...	12 50
No. 2 X lake ore coke iron...	12 00
Niagara coke malleable...	12 50
Standard Georgia C. C.	15 75

ROGERS, BROWN & CO.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., September 30.

In the local lumber market conditions remain unchanged, and the volume of business reported is moderate. Manufacturers and dealers, however, are somewhat encouraged, and anticipate considerable trade during October. There is a better demand from builders, and planing mills and box factories are purchasing more freely. Receipts of yellow pine are fair, and stocks more than ample for the existing demand. During the week sales of air-dried yellow pine have been made at a shade lower figures in some cases, and values at the close of the week are barely steady. On the other hand, kiln-dried North Carolina pine is firmer as to values, and while there is no excessive demand, a fair trade from out of town has been developed during the week. White pine is firm, with a better demand, and prices a shade higher. Cypress is dull, with values steady. In hardwoods there is a good local demand from woodworkers and others, while out-of-town buyers have been in the market during the week. There is little or no export trade, and shippers are not disposed to operate at the moment to any great extent on account of large surplus stocks in Great Britain and the Continent.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE	
5-4x10 No. 2, kiln dried...	\$12 50@13 50
5-4x12 No. 2, kiln dried...	14 00@15 00
4-4x10 No. 1, kiln dried...	15 00@15 50
4-4x12 No. 1, kiln dried...	15 00@16 00
4-4 nar. edge, No. 1, kiln dried...	12 50@14 00
4-4 wide edge, No. 1, kiln dr'd...	17 50@18 50
6-4x10 & 12, No. 1, kiln dried...	23 00@24 00
4-4 No. 1 edge floor, air dried...	12 50@13 50
4-4 No. 2 edge floor, air dried...	10 00@11 00
4-4 No. 1 12-in. stock, air dried...	15 00@16 00
4-4 No. 2 12-in. stock...	12 50@13 50
4-4 edge box or rough wide...	8 00@8 50
4-4 edge box do. (ord. widths)...	7 00@7 50
4-4 12-inch rough...	9 00@9 50
1/2 narrow edge...	5 50@6 50
1/2 wide...	6 50@7 50
3/4x9 1/2 and 10 1/2-inch...	7 50@8 50
Small joists, 2 1/2"-12, 14 and 16 long	7 50@8 50
Large joists, 3-16 long and up	8 00@9 00
Scantling, 2x3, 2x4 and 3x4...	7 00@8 00

WHITE PINE.

1st and 2d clear, 4-4, 5-4, 6-4 and 8-4...	\$47 00@48 00
3d clear, 4-4, 5-4, 6-4 and 8-4...	42 00@43 00
Good edge culls...	14 50@15 50
Good stock...	16 50@17 50

CYPRESS.

4-4x6, No. 1...	\$19 50@20 50
4-4x6, No. 2...	13 50@14 50
4-4x6, 16 feet, fencing...	10 00@11 00
4-4x6, rough...	8 50@9 00
4-4 rough edge...	8 00@8 50
4-4 edge, No. 1...	16 00@17 00
4-4 edge, No. 2...	12 00@13 00
Gulf, 4-4, Nos. 1 and 2...	25 00@29 50
Gulf, 6-4, Nos. 1 and 2...	28 00@30 00

HARDWOODS—WALNUT.

5-8, Nos. 1 and 2...	\$50 00@75 00
4-4, Nos. 1 and 2...	80 00@90 00
5-4, 6-4 and 8-4...	85 00@95 00
Newell stuff, clear of heart...	85 00@100 00
Culls...	20 00@30 00

OAK.

Cabinet, white and red, Southern, plain-sawed and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4...	\$30 00@34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4...	53 00@55 00
Culls...	10 00@15 00

POPLAR.

Nos. 1 and 2, 5-8...	\$24 50@25 50
Nos. 1 and 2, 4-4...	28 00@30 00
Nos. 1 and 2, 6 and 8-4...	32 50@33 50
Culls...	11 50@12 50

SHINGLES.

Cypr., No. 1 h'rts, sawed, 6x20...	\$6 25@7 00
No. 1 saps, sawed, 6x20...	4 75@5 00
No. 1 hearts, shaved, 6x20...	6 00@7 00
No. 1 saps, shaved, 6x20...	4 75@

LATHS.

White pine...	\$1 85@2 00
Spruce...	2 00@2 10
Cypress...	1 50@1 60

Norfolk.

[From our own Correspondent.]

Norfolk, Va., September 27.

The volume of business during the present month in nearly all avenues of

the lumber industry in this section has been fair, and the demand steady, with prices generally firm, and in some cases showing a slight advance. In North Carolina pine orders are coming in steadily and in sufficient numbers to keep mills running at their full capacity. It is thought by manufacturers generally that with the advent of autumn an active demand will develop; in fact, as to the business of the present month sales of kiln-dried as well as air-dried stuff show a considerable improvement. Stocks are not allowed to accumulate, and at the moment the assortment of grades is somewhat broken, 4-4 and 5-4 No. 1 stock and wide edge and 4-4 and 5-4 No. 1 edge being still scarce. In air-dried lumber there is a moderate demand, box grades only showing much activity. From the interior the reports are favorable in most cases, and mills are generally working up to their full capacity. In Eastern Virginia and North Carolina there is at present a serious drought, which interferes very much with logging interests. In the local market planing mills are all busy, and the demand for dressed stuff shows considerable improvement, while prices are a shade higher. Box factories and other wood-working concerns in the city are also doing better, and have their files generally well filled with orders. The local demand for lumber and building material is good, as numerous improvements in the city proper and suburban points are now under way, and builders are looking forward to a very busy winter. Freights on lumber are steady, with rates unchanged.

Savannah.

[From our own Correspondent.]
Savannah, Ga., September 27.

During the week under review the market for wood products has been active and the volume of trade shows some improvement. There is a better feeling among manufacturers and dealers both here and at nearby ports, and from the number of charters reported last week in New York considerable business will be developed during the month of October. At all milling centres there is considerable activity, nearly all the mills having plenty of orders. The demand for desirable grades of lumber is very decided both from domestic and foreign sources. There is more demand for lumber from South American ports than usual, and in cross-ties there is a good business with Northern centres. The market on Saturday closed firm at the following quotations: Ordinary sizes, \$10.50 to \$11; difficult sizes, \$12 to \$14; flooring boards, \$15 to \$17; shipstuff, \$14.50 to \$18, and sawn ties, \$9.50. Among the clearances during the past week the following vessels were reported: Schooner Douglass Gregory for Philadelphia with 179,526 feet of pitch-pine lumber and 1121 cross-ties measuring 50,025 feet, by Dixon, Mitchell & Co., and 258,220 feet of pitch-pine lumber by the Georgia Lumber Co.; Spanish brig Alfredo for Seville, Spain, with 183,777 feet of pitch-pine lumber and 12,250 white-oak staves, and schooner Emily F. Northam for Philadelphia with 257,448 feet of lumber. New York steamers took out over 100,000 feet of pitch-pine lumber. Freights are firm at ruling rates. The rates on lumber from this and nearby ports of Georgia are \$4 to \$4.50 for a range including Baltimore and Portland, Maine. Railroad ties, basis 44 feet, to Baltimore, 12 cents; to Philadelphia, 13 cents; and New York, 13½ cents; to Rosario on lumber, \$12 to \$13; to Buenos Ayres and Montevideo, \$10 to \$11; to Rio Janeiro, \$14, and to Spanish and Mediterranean ports, \$11.30 to

\$11.50. The following charters were reported last week in the New York market: A schooner, 521 tons, from Brunswick to a sound port with lumber at \$4.87½; a schooner, about 1200 tons, from Brunswick to New York with cross-ties at 14½ cents; schooner M. E. Palmer, 1378 tons, from Brunswick to New York with cross-ties at 11¼ cents, loaded and discharged; schooner Stella B. Kaplan, 1024 tons, same voyage, 12 cents, loaded and discharged; schooner Julia A. Trubee, 392 tons, from Savannah to New York with lumber on private terms; bark Conductor, 1063 tons, from Savannah to Santos with lumber at \$14 net; schooner Frank Vanderherchen from Savannah to Philadelphia with lumber at \$4.12½, 50 M feet a day, coal out at 85 cents, and bark Mabel, 701 tons, from Brunswick to Rio Janeiro with lumber at \$13.25.

Pensacola.

[From our own Correspondent.]
Pensacola, Fla., September 27.

While existing conditions at neighboring ports have a slight tendency to restrict operations in wood products, the volume of business here shows no material diminution. During the month of August business was fairly active, and shipments amounted to over 22,000,000 superficial feet, distributed as follows: Sawn timber to the United Kingdom, 9,200,000 feet; Continent, 2,700,000 feet; hewn timber to United Kingdom, 4090 cubic feet; Continent, 25,786 cubic feet; lumber to United Kingdom, 4,800,000 superficial feet, and Continent, 4,500,000 feet. During the present month the shipments have been fair, but exporters are cautious, and, as the markets in Great Britain and the Continent are well supplied, exports are limited. Prices for sawn timber both here and at Ferry Pass are very steady, and stocks in first hands are by no means excessive. During the past week the following vessels were among those clearing with cargoes: Bark Agathe for Aarhus with 449,000 superficial feet of sawn timber, 2086 cubic feet of hewn timber and 390,000 feet of lumber; steamship Saba for Dundee and Leith with 485,964 superficial feet of sawn timber and 1,241,042 feet of lumber; bark Bessie Hamilton for Dublin with 10,094 cubic feet of hewn timber, 135,000 superficial feet of sawn timber and 399,000 feet of lumber; bark Eastern Light for River Mersey with 894,000 feet of sawn timber and 12,000 feet of lumber, and bark Annie M. Law for Rio Janeiro with 775,000 feet of lumber. Freights on both lumber and timber to domestic and foreign ports are not materially changed, rates being steady, with a moderate offering of desirable tonnage. We note the following charters made last week in New York: A Norwegian ship, 1329 tons, from Pensacola to Rio Janeiro with lumber at \$15—\$2 form, and the Russian bark Verandi, 772 tons, from Pensacola to Buenos Ayres with lumber at \$12.

St. Louis.

[From our own Correspondent.]
St. Louis, Mo., September 27.

The volume of business for the month about closing has been remarkably good in nearly every department of the lumber industry. A good demand in all lines has been the rule, while prices throughout the list generally show an advance over last month. Yellow pine is in active demand, and mills are generally supplied with orders to the full extent of their capacity for several months to come. Manufacturers are generally very firm in their demands, and will not fill orders except at outside figures. During the month white pine has showed more firmness, and there is a better out-

of-town demand, while the local business is considerably improved. Stocks of white pine are generally well assorted, and all along the line sharp advances in prices are reported. There is very little change in the conditions surrounding the hardwood market, which continues to show the same steady improvement. Hardwood men generally regard the market as very satisfactory; prices continue to advance on all varieties of hardwood, and the demand from local yards and factories is quite pronounced. Oak is in good shape, and all descriptions are in demand, red, white, quartered or plain being wanted. Dimension stock and all kinds of car material are selling well. Other woods are in fair demand, and in poplar especially there is a firmer tone. It is stated that 8x8 and 10x10 poplar squares were sold at \$20 last week in the open market. The Lumbermen's Exchange reports the receipts for the week ending the 18th inst. at 18,416,000 feet, and for the corresponding week last year 11,509,000 feet. The shipments for the week amounted to 10,380,000 feet, against 6,096,000 feet last year. The increase in receipts from January 1 to September 18, inclusive, over last year amounted to 11,808,000 feet, and in shipments to 26,016,000 feet.

Lumber Notes.

The Scarritt-Comstock Furniture Co., of St. Louis, Mo., filed a statement last week of increase of capital stock from \$50,000 to \$150,000.

The Kentucky Lumber Co.'s saw mills at Burnside, Pulaski county, Kentucky, were destroyed by fire last week, involving a loss of \$40,000.

The Thomasville Chair Factory, at Thomasville, Ga., was destroyed by fire on the 24th ult. The loss is estimated at \$5000, with no insurance.

The R. G. Dennis Lumber Co.'s plant at Suffolk, Va., was sold at public auction last week, when Mr. George Truitt became the purchaser at \$19,150.

The Asher Lumber Co., at Ford, Ky., will continue to run its mills until November or later. The sales of the company have been unusually good this season.

A fire occurred in the lumber-yard of Church & Stephenson at Washington, D. C., last week, causing a loss of \$20,000, with an insurance of not more than half that amount.

The Emerson-Berrien Furniture Co., of El Paso, Texas, was chartered last week, with a capital stock of \$10,000. The incorporators are G. W. Emerson, E. V. Berrien and Robert Junnoville.

The British bark Albania, now due at Sabine Pass, is chartered to take a cargo of 1,300,000 feet of lumber to River Platte. The Orange Lumber Co. and the Wingate Lumber Co. will furnish the stock.

A charter was granted last week to the National Lumber Co., of Alexandria, Va., with principal office in Washington. The officers of the company are R. H. Boyd, president, and N. J. Barrett, secretary and treasurer.

The Magnolia Planing Mill Co., of St. Louis, Mo., filed articles of incorporation last week, with a capital stock of \$5000. The incorporators are George Kempf, Bernard Dangler, Charles Kauffman and Fred W. Ray.

The Forest Hill Lumber Co., of Alexandria, La., shipped on the 18th inst. over the Watkins Route to Calcasieu Pass, for export to Liverpool, 600,000 feet of Calcasieu long-leaf pine lumber loaded on a train of fifty flat cars.

A fire at Hammac, Ala., on the 22d

inst. destroyed the Forshee Lumber Co.'s dry-kilns and planing mill, with contents consisting of 700,000 feet of dressed and rough lumber and 200,000 feet of deals in yards. The loss is estimated at \$20,000, with insurance \$8000.

The Reliance Lumber Co., of Beaumont, Texas, made one shipment last week of thirty-one cars of lumber to Houston and thence to Galveston for export to a foreign market. The Reliance also booked an order for 500,000 feet of timber for shipment to New York.

The Fergusson Lumber Co.'s mill at Little Rock, Ark., which has been idle since June, 1896, started up last week. The mills of the old Clarkson-Christopher Lumber Co., among the largest in South Arkansas, also started, after being idle since 1895.

The British steamship Flavonius, which sailed from Pensacola last week for Rio Janeiro with a cargo consisting of 1,143,000 feet of pitch pine, valued at \$12,500, was destroyed by fire when eighteen miles from Pensacola lighthouse. The ship and cargo was a total loss.

The schooner Mabel Hooper cleared last week from Charleston, S. C., for Portland, Me., with a cargo of 420,000 feet of lumber; the schooner Nelson E. Newberry for New York with 540,000 feet, and the Clyde steamer Iroquois with 31,632 feet of lumber and other cargo.

The lumber-yard, sash, door and blind factory of Butts & Cooper, at Columbus, Ga., was destroyed by fire on the 20th inst. The plant and stock of the firm was valued at \$20,000, on which there was \$3500 insurance. The Southern Railway's freight depot was also destroyed, causing a loss of \$7000.

The American schooner Kate S. Flint cleared for Colon last week from Brunswick, Ga., with a cargo of 454,000 feet of lumber and 24,000 feet of timber from the Southern Pine Co. The American bark R. A. C. Smith sailed last week from the same port for Boston with a cargo of 498,000 feet of lumber from the Hilton-Dodge Lumber Co.

The Department of the Interior has accepted the bid of Frederick L. Gilbert for all the timber on Red Cliff, Chippewa Indian reservation, in Wisconsin. It is estimated that the timber amounts to 100,000,000 feet, and Mr. Gilbert's bid is \$416,000. The conditions of the sale provide that Mr. Gilbert shall establish mills on the reservation and manufacture lumber from the timber cut, which shall not be less than 10,000,000 feet nor more than 20,000,000 feet a year.

A meeting of poplar dealers and manufacturers from West Virginia, Ohio, Kentucky and Tennessee was held in Cincinnati, Ohio, on the 21st to discuss the formation of another poplar association upon different lines from previous organizations. Mr. M. B. Farrin, of Cincinnati, called the meeting to order, and stated briefly some of the results which would accrue by such an organization. After some discussion a committee was appointed to report a constitution and nominate permanent officers of the association. At the afternoon session the committee made its report on permanent organization and nominations. The report as far as it referred to the constitution was adopted as a whole, after which followed a discussion on the nominations for officers. The following were declared elected: President, F. C. Fisher, Yellow Poplar Lumber Co., Coal Grove, Ohio; vice-president, M. B. Farrin, Cincinnati, Ohio; treasurer, Thomas B. Stone, T. B. Stone Lumber Co., Cincinnati, Ohio.

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CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

ALABAMA.

Anniston—Car Works.—As a result of the reorganization of the United States Car Co., which has been in progress for several months, the Illinois Car & Equipment Co. has been organized to succeed it. O. M. Stinson, of Anniston, has been chosen superintendent of the Southern plants, at New Decatur and Anniston, and is now in charge. The Anniston plant is now at work, employing over fifty hands; 200 more will be put on next week, and a full force will be at work as soon as arrangements can be completed.

Birmingham—Metallic Crosstie Works.—Regarding the metallic crosstie works noted last week, Alonzo Bidwell, of Kansas City, Mo., writes as follows: "We will start work on buildings within six months; buildings and machinery to cost \$75,000, consisting of steel furnace, rolling mill and hydraulic machinery." The prospectus of the Bidwell Metallic Tie Manufacturing Co., which is to operate the plant, shows the capital stock to be \$150,000, with A. Bidwell, president; A. H. Bandy, secretary; Frank Bever, treasurer—these forming, with B. F. Meeks and J. A. Lents, the board of directors.

Jacksonville—Clothing Factory.—It is proposed to establish a factory for shirts, jeans pants, overalls, etc. For information address V. H. Lashram.*

Piedmont—Cotton Mill.—The Coosa Manufacturing Co., noted last week, writes that it has purchased the Barlow & Thatcher Spinning Co.'s plant, of 5168 spindles, at Henry Clay, Del., and will remove the said machinery to the Piedmont mill. This will make 15,408 spindles in all. A new boiler will be put in and a belt-tightener purchased; J. W. Hawke, secretary.

Raccoon Lake (P. O. at Florence)—Flour Mill, Grist Mill, etc.—John H. Young, of Florence, Ala., will erect a cotton gin and grist mill in Raccoon Lake, and possibly later on put in roller flour-mill equipment.

FLORIDA.

Fernandina—Electric-light Plant Extension.—The city clerk writes that the city wishes to add to its present electric arc system a 1000 16-candle-power-light incan-

descent dynamo, with engine and boiler, etc. New power-house will also be erected to accommodate the extensions; Geo. S. Roux, clerk.*

Jacksonville—Machine Shop Report Erroneous.—John G. Christopher writes that the report concerning the building of a machine shop by him was erroneous; he is instead erecting a store building.

Jacksonville—Electric-light Plant.—The city council has passed an ordinance authorizing the expenditure of \$30,000 for improving and increasing the electric-light plant, as recently noted. The superintendent of the plant has been ordered to prepare plans and specifications of additions, so that bids can be called for; Wm. C. West, secretary board of public works.*

Liveoak—Water Works.—Thomas Dowling, who recently obtained water-works franchise, is arranging for the commencement of work.

GEORGIA.

Allatoona—Gold Mills, etc.—The Sixes Gold Mining Co. proposes the erection of a chlorination plant, 20-stamp mill, etc., to facilitate the development of its mine. This company was incorporated recently with a capital stock of \$500,000, the directors subsequently elected being Henry B. Tompkins, Dr. F. H. Orme and C. W. Huntcutt, of Atlanta, Ga.; J. H. Moore and A. B. Coggins, of Canton, Ga., and F. H. Russell-Howland, of Allatoona, Ga. The last-named can be addressed for information.

Barnesville—Foundry, Machine Shop, etc. James McRae, of Brunswick, Ga., will locate at Barnesville a foundry, machine shop, corn mill, etc.

Cedartown—Cotton Mill.—The Cedartown Co. is about to build a hosiery-yarn mill of about 7500 spindles capacity; location has not yet been definitely determined. For information address the Cedartown Co., 119 S. Fourth street, Philadelphia, Pa.

Cochran—Electric-light and Water Works. Electric-light plant and water works will be erected. E. H. Smith can be addressed.

Fitzgerald—Box and Basket Factory.—C. R. Taylor, of Tallapoosa, Ga., has been investigating in Fitzgerald relative to establishing a crate, box and basket factory.

Flovilla—Water-power Development.—It is stated that plans may possibly be furthered for the development of the water-power at Ocmulgee Mills, near Flovilla. It is estimated that 20,000 horse-power can be developed. Walter Lamar can give information.

Macon—Electric-light Plant.—Plans are on foot for the organization of a new electric-light company to supply the city and business buildings. It is said that the plans contemplate the purchase of the plant of the Macon Gas Light & Water Co. and its complete rehabilitation, etc.

Savannah—Drainage System.—The city council committee on house drainage has recommended the adoption of the Waring system and the acceptance of a proposition from Colonel Waring (Geo. E. Waring, superintendent of streets of New York city.) to act as engineer and to furnish all plans and specifications. Address the mayor.

Villa Rica—Cotton Ginnery, Flour Mill, Planing Mill, etc.—W. L. Gaines (recently Gaines & Fuller) is now rebuilding his burned ginning plant; will put in four 70-saw gins, machinery for which has been purchased. After January 1 a roller flour mill and a planing mill will be added to the plant.

KENTUCKY.

Lexington—Brewery.—It is reported that J. H. Zitt and F. C. Long, said to be brewers of Chicago, Ill., contemplate the erection of a \$100,000 brewery in Lexington.

LOUISIANA.

Louisiana—Rice Culture.—F. M. Ferris, of Kansas City, Mo. (office in New York Life Building), is forming two companies for the cultivation of rice on 10,000 acres of land in Louisiana.

Mansfield—Telephone Line.—The De Soto Telephone Co. has been organized, with P. E. Allen, of Grand Cane, president; A. F. Jackson, of Mansfield, general manager, and E. G. Hinkle, of Grand Cane, secretary-treasurer. Capital stock is \$5000, and the line is to connect Mansfield and Shreveport. Construction of the system is now in progress.

New Iberia—Water Works.—The city is about to arrange for the completion of the water works proposed. Artesian wells will be bored for supply. A. J. Cammack, city secretary, can be addressed.*

West Monroe—Water Works.—Arrangements are being completed for the construction of the proposed water works, recently noted. F. L. Hood, secretary, can be addressed for information.*

MARYLAND.

Baltimore—Coal and Feed Company.—Incorporated: The Carroll Coal & Feed Co., by William A. Carroll, John T. Fahey, Patrick A. Murphy, J. Frank Ryley and James Hewes, with a capital stock of \$4500, to deal in coal and feed.

Baltimore—Coal Company.—The Robinson Coal Co., with a capital stock of \$3500, has been incorporated by Melvin F. Robinson, Joseph J. Robinson, Jr., George W. Meise, George Gruner and Frederick Albrecht.

Baltimore—Tanners, etc.—The Deford Co., for the sale of leather, has been incorporated under the laws of West Virginia, with stock subscribed of \$568,000, and privilege of increasing to \$1,000,000. Thomas Deford, John E. Hurst, Benjamin F. Deford, Jr., Thomas Deford and William Kennedy Cromwell are the incorporators.

Snow Hill—Cigar Factory.—John L. Nock will establish a cigar factory.

Sparrow's Point—Cement Works.—The Maryland Cement Co.'s plant now being constructed, as stated last week, will be ready for operations in six weeks. Capacity will be 500 barrels of cement daily, manufactured from furnace slag, 300-horse-power engine, crushing, pulverizing and other machinery being used, all of which is said to have been contracted for; Frank H. Sloan, president; Geo. H. Wales, vice-president; B. G. Bolleau, treasurer, and W. G. Soldan, secretary. Capital stock is \$50,000. It is reported that the company may investigate the Birmingham district and other iron-making localities in the South with a view of erecting other plants.

Washington, D. C.—Lumber Company.—The National Lumber Co. has been incorporated in Virginia, with R. H. Boyd, president, and N. J. Barrett, secretary-treasurer.

MISSOURI.

Corming—Creamery.—Henry A. Dankers, J. A. Busch, E. A. Rosellins and others have incorporated the Corming Creamery Co., with a capital stock of \$4000.

Farmington—Mining Company.—Incorporated: The Mikado Lead & Cabbott Mining Co., capital stock \$50,000, by George J. Cole, A. T. Nixon and P. S. Cole.

Kansas City—Manufacturing Company.—Incorporated: The Puntney-Mitchell Manufacturing Co., capital stock \$25,000, by A. Puntney, S. A. Mutchmore, J. W. Mitchell and others.

Kansas City—Tobacco Factory.—Chartered: The Columbia Tobacco Works, capital stock \$2000; incorporators, Joseph Wedeles, Arthur F. Albright, Evan Albright and others.

Kansas City—Mercantile.—Incorporated: The Bosse Mercantile Co., capital stock \$4000, by Christine Bosse, Chas. H. Bosse, Henry A. Bosse and Wilhelmina Hemmings.

Kansas City—Building Company.—Chartered: The W. A. Kelly Building Co., capital stock \$10,000; incorporators, W. A. Kelly, C. Kelly and L. V. Kelly.

Memphis—Manufacturing Company.—Chartered: The Cilmax Manufacturing Co., capital stock \$2000; incorporators, W. W. Eckman, P. H. Bennett, T. J. Brumback and others.

St. Louis—Mercantile.—T. Connor, G. Eagan and M. C. Eagan have incorporated the Connor-Eagan Grocery Co., with a capital stock of \$5000.

St. Louis—Planing Mills.—George Kempf, Bernard Dengler, Charles Kauffman and Fred W. Ray have incorporated the Magnolia Planing Mill Co., with a capital stock of \$5000.

St. Louis—Publishing.—Chartered: The St. Louis Manufacturer Publishing Co., capital stock \$2500, by J. W. Vancleave, L. D. Kingsland, Walter B. Woodward, Edwin H. Conrades and T. L. Cannon.

St. Louis—Bakery.—Incorporated: The John Moestle's Vienna Bakery Co., capital stock \$5000, by John Moestle, James H. Keefe and Mary T. Moestle.

NORTH CAROLINA.

Cherryville—Cotton Mill.—The Gaston Cotton Mills will put in 1600 additional spindles, with other necessary machinery.

China Grove—Cotton Mill.—The Patterson Manufacturing Co. will erect a warehouse 30x40 feet for storage, etc., in order to make room for four new spinning-frames; additional machinery to be needed has been purchased.

Fayetteville—Electric-light Plant.—Electric-light plant for lighting the city is proposed, as previously stated. It is reported that a 125-horse-power steam plant will be installed at once. Address the mayor.*

Fayetteville—Telephone System, etc.—The Fayetteville Telephone & Telegraph Co. has been incorporated, with capital stock of \$10,000 and principal office in Tarboro, N. C. Purpose of company is to operate telephone lines in Edgecombe county, some of which are already constructed. Incorporators are Geo. A. Holderness, Joe Cobb and A. M. Fairly.

Huntersville—Cotton Mill.—W. E. Holt, J. S. Spencer and C. W. Johnson, of Charlotte, N. C., have purchased the Virgin Cotton Mill, at Huntersville, and will remodel same, put in new machinery and change it to spinning mill.

Randleman—Flour Mill.—The Pearl Roller Mills has been incorporated, with J. R. Hinkle, of Lexington, N. C., president, and W. J. Glass, secretary-treasurer. Company's 50-barrel flour mill is now being built.

Swannanoa—Saw Mills.—M. B. Wilkinson, of Asheville, N. C., who recently bought a 4000-acre timber tract near Swannanoa, is now erecting mills on same, saw mill to have daily capacity of 15,000 feet, dry-kilns, etc.

Wilmington—Water Works and Sewerage. The New Hanover Transit Co. will construct water works and sewerage system by next season; John W. Harper, manager.

SOUTH CAROLINA.

Charleston—Piano Factory.—Alfred E. Dustonsmith and Otto Wittschen have incorporated the Dustonsmith Piano Co., with capital stock of \$10,000, to manufacture pianos, etc. This company doubtless intends to succeed Dustonsmith & Cady, recently reported as manufacturing pianos.

Charleston—Electric Plant.—Chartered: The Charleston Edison Light & Power Co., by Byron T. Burt, John F. Ficken and Henry H. Ficken, of Charleston; Henry M. Francis, of Brooklyn, N. Y., and S. Dana Greene, of Schenectady, N. Y. The capital stock is to be \$100,000.

Charleston—Handle Factory.—A. E. C. Cramer is in correspondence with J. L. McLaughlin, of Bedford, Pa., relative to establishing a handle factory in Charleston.

Charleston—Piano Factory.—The Dustonsmith Piano Co., reported last week as incorporated, succeeds the firm of Dustonsmith & Cady, as stated; capital stock is \$10,000, and the manufacture of pianos will be continued. Captain Westcoat is president; Edw. Anderson, treasurer; Otto Wittschen, secretary, and Alfred E. Dustonsmith, general manager and superintendent.

Chester—Cotton Gins, Ice Factory, Fertilizer Factory, etc.—The Love Improved Gin Co. has been organized by R. A. Love, A. W. Love, W. A. Hardin, A. D. Darby and W. J. Tillman, with capital of \$10,000, to erect cotton gins. In the near future capital will be increased and an ice factory, oil mill and fertilizer factory erected.

Spartanburg—Planing Mill.—Miller Bros. have put in planing machinery.

Spartanburg—Ice Factory.—Captain Hallet is quoted as saying that Columbia (S. C.) capitalists will erect a 30-ton ice factory in Spartanburg.

Sumter—Electric-light Plant.—The Sumter Electric Co. has decided to put in a 200-horse-power Corliss engine.*

TENNESSEE.

Chattanooga—Woodworking Factory.—The Patten Manufacturing Co. has been incorporated by Will R. Patten and G. E. Jamme. A \$5000 plant will be equipped at once for the manufacture of cabinet ware for plumbers and coffins; will employ forty men.

Helenwood—Coal Mine.—Wm. Durr, of Walton, Ky., has opened a coal mine near Helenwood.

Nashville—Wire Fence Company.—The Farmers' Smooth Wire Fence Co., capital

stock \$10,000, has been incorporated by W. B. Jones, F. Dawson, Milt Derry, H. J. Bradshaw, John H. Blake, S. H. Caldwell, S. A. Miller, James E. Daniel, T. H. M. Hunter, H. A. Lovelace, George D. Van Horn, E. J. Cook, W. M. Harding, D. Gallimore and Marshall Compton.

Shelbyville—Steam Laundry.—Moulton & Damron have received the equipment of machinery for their new steam laundry; operations will commence at once.

TEXAS.

Brownwood—Oil Mill.—Chartered: The Brownwood Oil Mill Co., capital stock \$50,000, by W. Scott, E. B. Harrold and Robert McCart.

Canadian—Water Works.—A company has been organized to construct a system of water works, charter to be applied for at once; J. A. Chambers, president; J. F. Johnson, vice-president; D. J. Young, secretary, and George Gerlach, treasurer.

Corsicana—Cotton Mill.—The Farmers' Alliance has submitted a plan for the organization of the proposed cotton-mill company recently noted. Jas. L. Antry can be addressed for information.

El Paso—Furniture Company.—Chartered: The St. Louis Furniture Co., capital stock \$20,000; incorporators, W. B. Merchant, Frank Del Buono and W. Y. Wolf.

Floresville—Increase Capital.—The Floresville Oil & Manufacturing Co. will increase its capital stock from \$10,000 to \$35,000.

Huntsville—Water Works.—The city council has engaged Jas. F. Weed, of Houston, to prepare plans and specifications for \$12,500 water works for Huntsville. Address the mayor.

Jacksboro—Flour Mill.—The Jacksboro Mill & Elevator Co. has been organized, with a capital stock of \$20,000, to erect a 200-barrel flour-mill equipment for 100-barrel plant to be put in at once; machinery has been contracted for; J. W. Knox, president; D. B. Gilliland, vice-president; J. W. Aynes, secretary-treasurer, and J. P. Hackley, manager.

Lodi—Cotton Mill.—The proposed cotton-mill company, recently noted, is projected by W. C. Jones, who can be addressed for information. A \$50,000 mill, to be built on the co-operative plan, is contemplated.

Velasco—Ice Factory.—Shaw & Coffroth contemplate putting in an ice machine next summer.

Victoria—Water Works.—Reports say that water works may be constructed. Edw. Linn is said to be interested.

Waco—Electrical Company.—Chartered: The Waco Electrical Supply & Plumbing Co., capital stock \$10,000; incorporators, A. P. Moore, A. P. Duncan and J. J. Juaddell.

VIRGINIA.

Blacksburg—Flour Mill.—Harman Keister will build roller process flour mill, for which site has been purchased.

Charlottesville—Corn Mill.—John Z. Holladay intends to erect a corn mill.*

Harrisonburg—Water Works.—The city has awarded contract to Howard Neely, of Chattanooga, Tenn., at \$47,000 for the construction of a system of water works.

Richmond—Construction Company.—Chartered: The Midlothian Construction Co., formed for holding and selling real estate, executing building contracts and equipping and constructing the works of railroad, steamboat, ferry and street railway companies. The capital stock of the company is not to be more than \$10,000; president, E. B. Arnold, New York; vice-president, Ware B. Gay, Richmond; secretary and treasurer, Julius Baker, Richmond; directors, the above and L. Grady and T. B. Johnson, Jr., both of Richmond.

Waynesboro—Water Works.—The town has decided to expend about \$10,000 on the construction of a system of water works. For information address S. H. Lambert, chairman of committee, Box 193.*

WEST VIRGINIA.

Bellington—Lumber Mills, etc.—Chartered: The M. D. Himmelpy Lumber Co., with a paid-up capital of \$200,000, by M. D. Himmelpy and H. C. Wolfe, of Lewisburg, Pa.; S. F. Foreman, of Williamsport, Pa.; W. R. Kramer, of Milton, Pa., and Alston Gordon Dayton, of West Virginia. The company was organized by Mr. Dayton to develop a tract of 125,000 acres of timber land on the Roaring Creek Railroad, recently built through his efforts. A modern band saw mill, with a capacity of 3,000,000 feet a month, will be erected at once.

Benwood—Water Works.—Jas. Kennedy, of Bellaire, Ohio, has been granted franchise

for water works, and will at once drill for artesian supply.

Cairo—Water Works.—Reports state that water works are talked of, but no names are mentioned in connection with the project.

Caldwell—Water Works.—There is talk of the construction of water works, some reports stating that \$15,000 in bonds will be issued.

Frametown—Flour Mill.—Henry Waggy, of Sutton, W. Va., and B. D. Lewis, of Yankee Dam, W. Va., are building a 40-barrel roller flour mill at Frametown.*

Grafton—Telephone Lines.—Incorporated: The Grafton Telephone Co., for the purpose of operating a complete telephone system in West Virginia. The capital stock is \$10,000, B. F. Bailey and others being the incorporators.

Martinsburg—Publishing Company.—The Berkeley Publishing Co., subscribed capital \$5000, with privilege of increasing to \$10,000, has been incorporated by R. S. Eichlerberger, D. S. Eichlerberger, H. H. Emmert, George W. Johnson and John O. Lemon, to succeed the Berkeley Democrat, a daily paper.

Piedmont—Paper and Pulp Mills.—The West Virginia Paper Co. will erect a large addition to its paper and pulp plant, in which to place the machinery furnished by the United States government for the manufacture of postal cards, contract for the latter having been obtained by the company. E. C. Henderson, of Cumberland, Md., has contract to erect the building, as stated last week.

BURNED.

Austin, Texas.—Grist mill of Evans & Brinsidine; loss \$700.

Buena Vista, Ga.—H. Montgomery's cotton gin, variety works and saw mill; loss \$6500.

Burnside, Ky.—Lumber mills of Kentucky Lumber Co.; loss \$40,000.

Columbus, Ga.—Lumber mills of Butts & Cooper; loss \$75,000.

Columbus, Ga.—Butts & Cooper's lumber mills; loss \$16,000.

Donaldsonville, La.—John T. Forcha's cistern factory; loss \$2500.

Greensburg, La.—Cotton gin of J. W. and T. R. Cole.

Harmac, Ala.—Foshee Lumber Co.'s mills; loss \$20,000.

Hazlehurst, Miss.—Will E. Dodds's cotton gin.

Jernigan, Ala.—Jas. Blackman's ginnery and mill.

Lavon, Texas.—Gin of Williams Bros.

Longwood, La.—Hearne Bros.' cotton gin.

Mt. Vernon, Ky.—Warehouse of Alex. Dunlap.

Nahumata, Ga.—E. D. Williams's turpentine still.

Neely, Ark.—W. M. Brasher's cotton gin.

Prescott, Ark.—Vickers cotton gin; loss \$2500.

Rosston, Texas.—Gin of John Lucas.

Round Rock, Texas.—Cotton gin of Bradford Bros.; loss \$5000.

Staunton, Va.—Fertilizer factory of J. E. Graham.

Thomasville, N. C.—The Thomasville Chair Factory; loss \$5000.

BUILDING NOTES.

Alexandria, La.—Mercantile Building.—Paul Lisso will erect a mercantile building, single story, press brick, 26x120 feet. Site has been purchased for \$3500.

Anderson, S. C.—City Hall, etc.—The City Hall, for which the Anderson Lumber Co. has contract at \$10,000, is to be a two-story structure, 60x90 feet, and have accommodation for entire force of city officers, including rooms for three large engines and reel, property rooms, closets, electric lights, water systems, etc.

Atlanta, Ga.—Armory.—It is proposed to organize the Fifth Regiment Armory Association, with capital stock of \$75,000, to build an armory building. A structure to cost \$42,000 is contemplated, to have seats for 5000 people, bathing pool 35x155 feet, rifle range, gymnasium, etc. Address Colonel Candler, of the regiment.

Baltimore, Md.—Dwellings.—L. Irving German has permit to build twenty-two two-story brick dwellings; John Czarski has permit to build ten two-story brick residences; George Gunther has permit to build three-story dwelling.

Baltimore, Md.—Dwellings.—Permits issued to Wm. W. Baker for twenty-seven

two-story brick houses, and to David Horn for five two-story brick buildings.

Chattanooga, Tenn.—Dwelling.—The Kunz Estate will erect an apartment-house, after plans by a Cincinnati architect; building will cost \$15,000.

Chattanooga, Tenn.—Warehouse.—The Mountain City Mills Co. will erect a warehouse to cost \$10,000.

Claxton, Ga.—School.—The town will vote on \$3000 in bonds for erection of a school building. Address the mayor.

Covington, Ky.—School.—The Sisters of the Academy of Notre Dame have permit to build a \$14,000 schoolhouse.

Crossville, Ala.—Jail.—Cumberland county will build a new jail. Address the county clerk.

Fort Worth, Texas.—Depot.—A new union depot will doubtless be erected in Fort Worth, work to commence within thirty days. L. S. Thorne, general manager Texas & Pacific Railroad, can be addressed.

Kansas City, Kan.—Foundry Building, etc. The Kansas City Car & Foundry Co. is asking bids on a foundry building 104x144 feet, of steel construction, set on steel posts, trusses to be eighteen feet centres and sixteen feet in the clear under ties; roof to be sheathed with two and three-quarter-inch plank, covered with composition gravel; monitor full length of building nine feet high at eaves; roof to sustain load of forty pounds per square foot of surface, and in addition moving load of 6000 pounds suspended between each truss. Will also be in market for 80-horse-power boiler and engine; P. W. Master, general manager.

Jacksonville, Fla.—Store Building.—John G. Christopher is erecting a store building.

Lafollette, Tenn.—Mercantile Building.—John Bowman, of Lafollette, and W. L. Bowman, of Mill Springs, will erect a three-story mercantile building.

Louisville, Ky.—Dwellings.—William Bennett has permit to erect twelve two-story dwellings at a cost of \$36,000.

Louisville, Ky.—Dwellings.—Clark & Loomis have prepared plans for \$12,000 residence for Dr. Grant and for apartment-house for H. Eggers.

Loudon, Tenn.—Warehouse.—D. Getaz & Co. have contract to build a 50x200 feet warehouse.

New Orleans, La.—Dwellings.—Permits granted: To Illinois Central Railroad for \$15,000 frame shed; to S. Oteri for \$4000 alterations, etc.; to Mrs. C. M. Kippan for frame cottage to cost \$1495; to D. E. Weill for frame cottage to cost \$2720; to Charles Genella for \$1500 cottage.

Pensacola, Fla.—Masonic Temple.—A three-story temple, 40x150 feet, to cost \$15,000, is proposed by the Freemasons. Address secretary A. F. and A. Order of Masons.

Sedalia, Mo.—Market-house.—Contract for rebuilding market-house let to George E. Dugan at \$8900.

Tuscaloosa, Ala.—Depots, Engine-houses, etc.—The Hanover Construction Co. will open bids October 7 for the construction of 200 miles of main track, and for sixty depot buildings for way stations; passenger depot for Tuscaloosa; freight depot; freight depot for Montgomery, Ala.; one engine-house, sandhouse, oilhouse, coal bin at Tuscaloosa; engine-house, shop building, sandhouse and oilhouse at Montgomery; twenty sets of section houses, with toolhouse for each, nine water stations, pumping engines, boilers, etc.

Washington, D. C.—Dwellings.—Michael Esch has let contract for \$3000 dwelling; N. T. Haller has completed plans for apartment house, three stories high; L. O. Tompkins will erect two modern dwellings; Robert H. S. Stone will erect \$2700 residence; Galen A. Tait will erect \$3000 residence; A. L. Harris has plans for two brick dwellings to cost \$7000.

RAILROAD CONSTRUCTION.

Railways.

Arnaudville, La.—A company has been organized under the title of the Palmetto & Gulf Railroad Co. to construct a line between Palmetto, in St. Landry parish, to Vermilion bay. The route is by way of New Martinsville and New Iberia. James A. Lee is president of the company; Emile C. Roger, of Arnaudville, vice-president, and Andrew Thorpe, secretary and treasurer. The distance is about forty-five miles.

Baltimore, Md.—It is reported that the Baltimore, Cincinnati & Western Railroad has as one of its principal promoters Albert E. Boone, who is associated with the Ohio

River, Knoxville & Tidewater Railroad Co. Mr. Boone has also secured franchises for several other lines, one of them the Springfield, Ohio River & South Atlantic road. A company has recently been formed at Peoli, Ind., in the interest of this road.

Bay City, Texas.—Subscriptions are now being secured for the proposed railroad from Galveston to Bay City, which is being promoted by the Galveston, Brazos & Southwestern Railroad Co. L. P. Featherstone, at Galveston, is general manager of the company.

Bowling Green, Ky.—M. H. Crump advises the Manufacturers' Record that it is proposed to use electric motive power on twenty-five miles of railway line, the electricity to be generated by water-power.

Deckerville, Ark.—It is reported that the Deckerville, Osceola & Northern Railroad Co. has determined to complete its line from Deckerville to Osceola, on the Mississippi river. The road will be a feeder of the Kansas City, Fort Scott & Memphis road. About twelve miles have already been completed. E. M. Ford is vice-president of the company. The extension will be about forty miles in length.

Farmington, Mo.—W. E. Bailey and others have decided to build an electric railroad between Farmington and Delassus, Mo. The road will be about three miles long and cost about \$30,000.

Florence, S. C.—It is reported that the Atlantic Coast Line will increase the size of its freight-yards at Florence, so that they will have a capacity for 1000 cars. John R. Kenly, at Wilmington, N. C., is general manager.

Fort Smith, Ark.—Tracklaying has begun upon the Arkansas Central Railroad, which is now under construction between Fort Smith and Paris. The road is to be about forty-five miles long. C. C. Godman, of Fort Smith, is one of the company.

Glendon, N. C.—Seventeen miles of the Durham & Charlotte Railroad have been completed and six miles of line are under construction. Surveys are now being completed from Gulf to Durham, N. C., which is to be the western terminus. Frank D. Jones, at Glendon, is superintendent of the company.

Harrisonburg, Va.—It is reported that surveys have nearly been completed for the extension of the Chesapeake & Western Railroad to what are known as the Dora coalfields. J. W. Reinhart, at No. 30 Broad street, New York, N. Y., is president of the company.

Houston, Miss.—The town of Houston has voted in favor of granting right of way and depot grounds to the Gulf & Chicago Railroad Co., which is considering the extension of its line in that section. The Gulf & Chicago is now completed between Middleton, Tenn., and Pontotoc, Miss., sixty-two and one-half miles. J. W. T. Falkner, at Oxford, Miss., is president of the company.

Kansas City, Mo.—The Kansas City, Fort Scott & Memphis Railroad Co., it is reported, has decided to make a number of extensions to its yards at Rosedale in the suburbs, and will construct about twenty additional tracks for this purpose. Edward S. Washburn, of Kansas City, is president and general manager of the company.

LaFollette, Tenn.—It is reported that the Tennessee Northern Railroad Co. is considering an extension of its line from LaFollette to a connection with the Louisville & Nashville system, at Jellico, Tenn. The distance is about twenty miles. A. Glasier, of Boston, Mass., is president of the company. H. M. LaFollette, at LaFollette, is interested.

Little Rock, Ark.—It is reported that arrangements are being made for the construction of the proposed State railroad in a north and south direction to the Virginia State line by a syndicate of St. Louis capitalists. Gov. D. W. Jones is one of the promoters of the project.

Little Rock, Ark.—Surveys are being made for extensions of the "Worthen" railroad system, to complete it between the St. Louis & San Francisco and Arkansas Midland roads. The extensions will aggregate about thirty-five miles, twenty miles being in the direction of Little Rock and fifteen in an easterly direction. W. B. Worthen and Oscar Davis, of Little Rock, are receivers of the company.

Lonoke, Ark.—The business men of Lonoke are promoting a proposed railroad line to connect this town with the Missouri Pacific system. The distance is about fifteen miles.

Nashville, Tenn.—It is reported that the supplies and animals are being purchased by railroad contractors for the purpose of beginning work on the Tennessee Central

at an early date. Jere Baxter, of Nashville, is president of the company.

Osceola, Mo.—Surveys are being made for an extension of the Kansas City, Osceola & Southern Railroad from Osceola to Bolivar, where it will connect with the St. Louis & San Francisco system. The road is now in operation between Kansas City and Osceola, a distance of 112 miles. B. S. Josselyn, at Clinton, Mo., is general manager of the company.

Shreveport, La.—The city has voted in favor of a tax of two and one-half mills to promote the construction of the Shreveport & Red River Valley road, which, it is understood, is to be built between Shreveport and Coushatta, La. Several other parishes, it is understood, will vote in favor of the same project. W. C. Taylor, at Shreveport, is one of the company.

St. Louis, Mo.—General Manager B. F. Yonkum, of the St. Louis & San Francisco Railroad Co., advises the Manufacturers' Record that the company intends extending its St. Paul branch about nine miles for the purpose of entering a tract of timber land.

Washington, D. C.—L. H. Hyer, chief engineer of the Chesapeake Bay Construction Co., advises the Manufacturers' Record that this company has secured the entire contract to build and equip the Washington & Chesapeake Beach Railroad, and will let the work directly to sub-contractors. Relaying rails may be used in sidings and yards. The company's address is corner Fifteenth and H streets.

Washington, D. C.—Surveys have begun along the line of the Washington & Chesapeake Beach Railway, with the view of completing this road. It is projected from Washington to Chesapeake Beach, on Chesapeake bay, a distance of about twenty-eight miles. A portion of the line has been graded. Otto Meares, of Denver, Colo., is president of the new company, and A. H. Dunn, of New York, vice-president. J. Kennedy Todd, of J. Kennedy Todd & Co., bankers of New York, is also reported as interested.

Washington, D. C.—A. B. Linderman, president of the Washington, St. Mary's Bay & Point Lookout Railway Co., advises the Manufacturers' Record that eighteen miles of this line are to be built at once, and are now under contract to be finished by January 10. It is expected to complete the road its entire length to Point Lookout by May 1. The distance is about seventy-eight miles. J. W. Bancroft is vice-president, and H. L. Montgomery, secretary and treasurer. The main office is No. 1011 Chestnut street, Philadelphia, Pa. Bids will be received about January 1 for constructing the balance of the road. Seventy-pound rails have been purchased.

Street Railways.

Carrollton, Va.—A correspondent of the Manufacturers' Record writes that the Carrollton Electric Railroad Co. may possibly extend its line, which has been completed a distance of one and one-quarter miles.

Houston, Texas.—It is reported that the Houston Electric Railroad Co. has determined to build an extension to Etta, in the suburbs. The extension will be about three miles long. H. MacGregor is general manager of the company.

Knoxville, Tenn.—The suburb of North Knoxville has authorized the Knoxville Street Railway Co. to extend its electric lines on certain streets in that city. R. K. Howard is general superintendent of the company.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler and Engine.—Wanted—A four to five-horse-power engine and boiler, to be operated by steam or gasoline. Address Box 35, High Point, N. C.

Boiler and Engine.—The Kansas City Car & Foundry Co., Kansas City, Kan., P. W.

Master, general manager, will be in the market for 80-horse-power boiler and engine.

Boiler and Engine.—P. E. Kennedy, 107 Coblenz street, Chicago, Ill., wants to buy 20-horse-power boiler and 16-horse-power engine, either portable or traction; new or second-hand. (See "Saw Mill").

Boiler and Engine, etc.—It is reported that a 125-horse-power steam plant is wanted at once by the town of Fayetteville, N. C. Address the mayor for verification.

Bridge.—Bids will be wanted on the construction of a bridge across White river, near Little Rock, Ark. Address W. B. Worthen and O. Davis, receivers, Little Rock.

Channel Work.—United States Engineer's Office, 905½ East Main street, Richmond, Va., September 27, 1897.—Sealed proposals for deepening and widening channel of James river, Va., and for constructing, repairing and revetment of wingdams, will be received here until 12 M. October 27, 1897, and then publicly opened. Information furnished on application to H. D. Whitcomb; Charles J. Allen, lieutenant-colonel, engineers.

Clothing-factory Equipment.—Information and prices on machinery for manufacturing shirts, jeans pants, overalls, etc., is wanted by V. H. Lashram, Jacksonville, Ala.

Coffin-factory Supplies.—The Carolina Manufacturing Co., Newberry, S. C., is in need of undertakers' supplies and cabinet hardware used in manufacturing coffins.

Corn and Meal Mill.—John Z. Holladay, Holladay, Va., wants to buy 15-horse-power engine, corn-meal outfit of ten bushels capacity per hour, and for corn, oats, cobs, etc., of ten to fifteen bushels capacity per hour.

Cotton-mill Machinery.—Thomas Bailey & Co., Athens, Ga., want to buy a 40 to 60-spindle twister, 3½-inch rings, five-inch traverse, suitable for making six-ply; must be nearly new.

Electrical Motors.—The Anderson Lumber Co., Anderson, S. C., wants prices on electrical motors from two to ten horse-power each.

Electric-light Plant.—The superintendent of city electric-light plant at Jacksonville, Fla., is preparing plans and specifications for addition to city electric-light plant; Wm. C. West, secretary board of public works.

Electric-light Plant.—The city of Fernandina, Fla., wishes to add to its present arc system a 1000 16-candle-power-light incandescent dynamo (500 lights to be put in at once), with engine and boiler sufficient to carry the 1000 when added; also to erect a power-house, place poles, run wires and furnish lamps, etc., for plant. The machinery would be required to be set up and run thirty days to the satisfaction of the city. For further information address George S. Roux, clerk.

Engine.—The Sumter Electric Co., Sumter, S. C., will put in a 200-horse-power Corliss engine.

Flour Mill.—B. D. Lewis, Yankee Dam, W. Va., and associates will buy equipment for 40-barrel flour mill complete.

Gasoline Engine.—See "Boiler and Engine."

Machinery and Tools.—N. K. Jansen, Clarendon, Ark., wants catalogues of tools and machinery.

Machine Tools.—Wanted—Screw-cutting lathe, 32 or 36-inch by ten feet between centres, iron planer 32 or 36-inch by 32 or 36x8 feet, back-gear drill-press about 32-inch, one shaper about 20-inch stroke; all to be in good order and second-hand. Address, with full particulars, Machine Tools, care of Manufacturers' Record, Baltimore, Md.

Mining Engineers.—Mining engineers may be interested in propositions of the Mining, Prospecting, Trading & Transportation Co., of 618 Commercial Place, New Orleans, La. Address Wm. G. Mayfield.

Piping, etc.—The Vinton & Roanoke Water Co., Chief Engineer S. B. Mosby, Roanoke, Va., will receive bids for furnishing and laying three miles of six and eight-inch pipe.

Railway Equipment (Electric).—Equipment will be wanted for 25-mile line of railway to be operated by electricity. The most improved modern long-distance machinery will be required. For particulars address M. H. Crump, Bowling Green, Ky.

Railway Equipment.—The Chesapeake Bay Construction Co., Fifteenth and H streets, Washington, D. C., will soon let contracts for construction of railway to the bay; relaying rails may be used. Address L. H. Hyer, chief engineer.

Railway Equipment, etc.—Washington, St.

Mary's Bay & Point Lookout Railway will be ready about January 1 to contract for grading, track-laying, ballasting, etc., for sixty miles of road; A. B. Linderman, president, 1011 Chestnut street, Philadelphia, Pa.; W. T. Forsythe, chief engineer, Brandywine, Md.

Saw Mill.—P. E. Kennedy, 107 Coblenz street, Chicago, Ill., wants to buy a portable saw mill to cut from 3000 to 5000 feet of lumber daily; logs to be cut are twenty-eight feet long and twenty-eight inches thick; also wants 20-horse-power boiler and 16-horse-power engine, portable or traction. All machinery mentioned may be new or second-hand.

Sewing Machines.—See "Clothing-factory Equipment."

Water Works.—Bids will be received on water-works materials, including 13,000 feet of pipe in three to eight-inch sizes, fittings for same, pumps, plugs, tanks, etc. Address S. H. Lambert, chairman of committee, Box 193, Waynesboro, Va.

Water Works.—The city of New Iberia, La., solicits bids for sinking artesian wells and constructing water-works system; about eight miles of piping to be required, stand-pipe, engine, etc. Population 6500. Address A. J. Cammack, city secretary.

Water Works.—Bids are asked until October 4 for the construction of water works at Delta, Pa. Bids will be received on complete plant and on materials separately. Specifications can be seen at mayor's office, Delta, Pa., or in office of C. S. York, engineer, 515 Equitable Building, Baltimore, Md.

Water Works.—West Monroe, La., is to commence work soon on water works, to include 2850 feet of six-inch and 4000 feet of four-inch water mains, twelve hydrants, 60,000-gallon tank on tower fifty feet high, 400,000-gallon pump, 25-horse-power vertical boiler, etc.; James Selmer, designing engineer; F. L. Hood, secretary.

Wire-twisting Machinery.—J. V. Frederick, Marshallville, Ga., wants to buy a simple machine to twist by hand 5-16 or ¾-inch wire, so that the twist will be uniform and straight; the 5-16-inch wire will be cut in 20-foot pieces, the middle of wire shaped around a frame, and where wire comes together on top of frame, wish to twist it uniform and straight, only two feet, the ends of wire remaining some five feet long.

Woodworking Machinery.—The Anderson Lumber Co., Anderson, S. C., wants prices on woodworking lathe with 15-inch swing, band saw, jig saw, rip saw, surface planer to plane sixteen inches wide and six inches thick.

Woodworking Machinery.—E. L. De Jarnette, Petersburg, Va., wants to buy machinery for manufacturing wood washboards and oval and round-wood bread trays.

TRADE NOTES.

Moved Offices.—The Virginia & Alabama Coal Co., of Birmingham, Ala., has moved its general offices to Patton, Ala., where all communications should be addressed in future.

Boilers and Railway Equipment for Sale.—Two new double-flue boilers, twenty-five feet long and forty-eight in circumference, are offered for sale by Messrs. Sabel Bros., Jacksonville, Fla. This firm is also offering a narrow-gauge equipment at a bargain.

Steam-heating Plants.—At Haverhill, Mass., New Britain, Conn., Lowell, Mass., Easton, Pa., Stillwater, Minn., and Boston, Mass., the Webster system of steam heating has been installed recently in some large buildings by Messrs. Warren Webster & Co., of Camden, N. J.

Removal.—The office of S. N. Blake, of Elmira, N. Y., formerly located in the Robinson Building, has been removed to 501-503 Y. M. C. A. Building (telephone 170). Mr. Blake is New York State agent for the Eddy Electric Manufacturing Co., manufacturer of electric-light and power machinery.

Dynamos for England.—The London (Eng.) office of the Westinghouse Electric & Manufacturing Co., of Pittsburgh, Pa., has closed a large contract with a light company in the English metropolis. The amount involved is more than \$400,000, and the machinery to be supplied includes three dynamos of 2000 horse-power.

Machinery for France.—The Davis & Egan Machine Tool Co., of Cincinnati, Ohio, has been awarded a contract by the French government for four heavy 36-inch standard engine lathes, with 22-foot beds. These lathes are to be equipped with metric lead

screw and full set of change gears for cutting a large range of threads of the metric pitch.

Separator Sales.—A decided improvement in orders for goods is reported by the Austin Separator Co., of Detroit, Mich., manufacturer of the Austin separator. The company's recent orders came from all the principal States and Canada, including also several Southern orders. Forty-two separators in all have been shipped very recently by the Austin Separator Co.

Steel Building.—The new machine shop building of Maris Bros., at Philadelphia, will be 55x75 feet in dimension, with a 10-ton power crane running full length of building, having span of thirty feet. The Berlin Iron Bridge Co., of East Berlin, Conn., designed the structure, which is to be built of steel, with corrugated iron sides and roof, and said company has contract to erect it.

Electrical Invention.—Mr. S. H. Cauffield, of Creighton, Pa., has invented an overhead trolley system for electrical railways, patents on which have been granted. The device provides for the trolley wheel running on the top side of the wire, and many excellent advantages for the new system are claimed. Address Mr. J. H. Cauffield, at Creighton, Pa., for any particulars desired.

Forgings.—The forgings in the engine of the torpedo boat Rogers, which was built by the Columbian Iron Works & Dry Dock Co., Baltimore, Md., which broke last week, causing considerable damage to the machinery, are being replaced by forgings from the well-known works of the Bethlehem Iron Co., at South Bethlehem, Pa. It might be well to remark that the forgings which broke were not made by this concern.

Transmission Rope.—The H. Channon Co., of 24-26 Market street, Chicago, Ill., has lately taken orders for its Ajax transmission rope to go into the new elevators now being erected at Peoria, Ill.; the new mill at Galveston, Texas; the new elevator for the Louisville & Nashville at Pensacola, Fla., and the new elevator at Kingston, Ont. The drive for the L. & N. R. Co.'s elevator is possibly the largest in the country.

Dynamos and Engines.—A number of important orders have been filled recently by the Ridgway Dynamo & Engine Co., of Ridgway, Pa. Included in the orders was a 150-horse-power engine for the Pennsylvania Railroad Co.; 50-kilowatt generator, direct connected to 12x12 engine; two 14x23 x18 tandem compound engines, direct connected to two 150-kilowatt generators; 50-kilowatt lighting generator, and a 50-kilowatt power plant, including direct-connected engine and generator.

Heating Systems.—Among some of the orders received recently by the Peck-Hammond Co., of Cincinnati, Ohio, was for correcting and putting in order the heating systems of nine schools in the city of Atlanta, Ga.; a system of dry closets for the new shop buildings of the Georgia & Alabama Railway; a heating and ventilating system for the high school building at Harrisonburg, Va., and for heating and ventilating system in the Plant system hospital at Waycross, Ga. This Peck-Hammond system of ventilation changes the air in the hospital rooms every few minutes, thereby preventing it from becoming vitiated.

Copper Works.—Pure copper, tempered evenly, free from blow-holes and sand-washings, and for commutator segments, of gauge and uniformity, is produced by the Mitchell Tempered Copper Co., of Corry, Pa. This company manufactures pure, hardened copper, electrical appliances of solid temper and uniform gauge, and it makes a specialty of segments and bevel bars. Capt. Dan Mitchell, superintendent of the company's plant, has had many years' experience, and claims that his castings are noted for their cleanness and other desirable features. The product of the Mitchell Tempered Copper Co. is well and favorably known to users of this class throughout the country.

TRADE LITERATURE.

Mine Machinery.—The Illustrated catalogue of the Jeaneville Iron Works Co. (Incorporated), of Jeaneville, Pa., is now being distributed. This company builds mine and special pumping machinery of every description and for every service.

Ornamental Wire and Iron.—Messrs. C. Hanika & Sons, of Muncie, Pa., have issued catalogue No. 14 of their plain and orna-

mental iron and wire fencing, railings, crestings, finials, etc. Estimates on this class of goods are promptly furnished by this firm.

Architectural Iron.—Messrs. C. Hanika & Sons, of Muncie, Pa., operators of architectural iron works, have issued catalogue No. 15 of vases, chairs and settees. This firm's product has a reputation of high merit, and the peculiar features of their vases are worthy of investigation.

General Machinery.—The September pamphlet of the Thos. K. Carey & Bros. Co., of Baltimore, Md., contains a list of the engines, boilers, pumps and other machinery and supplies handled by this concern. Revised price-lists on pulleys, hangers, shafting, etc., are also included.

Electrical Machinery.—Catalogue No. 7 of the Northern Electrical Manufacturing Co., of Madison, Wis., gives illustrations and descriptions of the motors, dynamos and electrical equipments built by this company. Its product includes electrical equipments for direct connection to all kinds of machinery.

Boilers.—The engines, boilers, etc., of the York Manufacturing Co., of York, Pa., are described and illustrated in the catalogue now before us. This company engages in a general business of engineering and contracting, and makes, besides boilers, engines, etc., a line of ice machinery, which has been previously noticed in this department.

Hydraulic Machinery.—General catalogue No. 28 of Worthington pumping engines, steam pumps and hydraulic machinery has been issued under date of August 20. This line of machinery is fully described and illustrated in this catalogue of the manufacturer, Henry R. Worthington, of Van Brunt and Rapelyea streets, Brooklyn, N. Y.

Hydraulic Machinery.—Supplement No. 4 to 1896 catalogue brings the literature of the Goulds Manufacturing Co., of Seneca Falls, N. Y., up to date with its manufacture. New double-acting well pumps and triplex power pumps occupy a considerable part of the pages and are worthy of special attention. Discount sheet is enclosed with the supplement.

Cahall Boilers.—The data and results of an evaporative test on one of the 200-horsepower Cahall water-tube boilers recently placed in the Narragansett Mills at Fall River, Mass., has been issued in leaflet form by the Cahall Sales Department of the Bank of Commerce Building, Pittsburg, Pa. The results as shown are exceptionally good, and would probably prove of interest to all boiler users.

Water-wheels.—It is said that the demand for turbine wheels is now greater than it has ever been. Among the many modern wheels in this class is the McCormick turbine, made by the S. Morgan Smith Co., of York, Pa. The company has just issued a catalogue devoted to the McCormick turbine, giving full descriptions and illustrations of the several types of this wheel and showing its performances under differing conditions of service.

New and Second-hand Machinery.—The Garvin Machine Co., Spring and Varick streets, New York, has issued List No. 20 of new and second-hand machinery in stock for immediate delivery. The machinery comprises many of the well-known makes of lathes, planers, shapers, drill presses, presses and shears, grinding machines, and many miscellaneous machine tools and special bicycle machines. The second-hand list shows a number of machines in as good condition as when new.

Chuck Catalogue.—In issuing the 1894 edition of its catalogue the Skinner Chuck Co., of New Britain, Conn., wishes to call attention to the great variety of chucks represented and to their special features, which have, it is claimed, given them general approval wherever used. The line described and illustrated includes independent lathe chucks (with reversible jaws), universal lathe chucks, combination lathe chucks, drill chucks, planer chucks (both round and square base), etc.

Stove Catalogue.—The 1897-98 catalogue of the Richmond Stove Co., of Richmond, Va., is a complete catalogue and price-list, illustrative and descriptive, of the line of goods manufactured by this well-known house. The line embraces cooking stoves and ranges, heating stoves, stove hollow-ware and furniture, grates, fenders, etc., in most modern styles. As for the quality of the product in question it is claimed that

none but the very best iron that can be obtained is used, which, for strength and toughness, cannot be excelled; that the goods are made by skilled workmen, and for excellence in finish, durability, economy in fuel, baking qualities and general merit are seldom equaled.

Magic Stage Illusions and Scientific Diversions, Including Trick Photography. Compiled by Albert A. Hopkins, with an introduction by Henry Ridgely Evans. Four hundred illustrations. Publishers, Munn & Co., New York.

In this volume a unique addition has been made to the literature of magic in the great attention paid to exposes of tricks of optics, mechanics, sound and electricity, and many of the tricks of Robert Houdin, Dr. Lynn, Pepper, Bautier de Kolta, Heller, Hermann, Maskelyne, Cooke and Kellar are explained. The art of the moderns, however, is not alone treated, for quite a large space is devoted to ancient magic. In addition stage illusions are discussed, many of them for the first time, automata and curious toys are described, and photographic diversions, including the photography of moving objects, are illustrated. One of the most interesting features of the volume is the introduction. This is written by Henry Ridgely Evans, who has devoted years to the study of the occult, and who is the author of a standard work, "Hours With the Ghosts, or Nineteenth Century Witchcraft." In terse language and brief space he condenses in interesting style a history of magic art, including many attractive experiences of celebrated magicians. Mr. Evans also is the author of the chapters on "Shadowgraphy" and "Mental Magic." The volume will furnish the means of entertainment for young and old, who either may be content to read its chapters or may learn to perform some of the simpler artifices themselves.

Visitors to Lincoln Park in Chicago will be delighted with the souvenir book of this beautiful spot now being distributed by the Chicago, Milwaukee & St. Paul Railway Co. It is a magnificent publication of ninety-six pages, full to overflowing with delicious half-tone pictures of one of creation's most charming places of resort for citizens of the great republic.

No stranger visiting Chicago should be without a copy of the "Souvenir of Lincoln Park." It can only be procured by inclosing twenty-five (25) cents, in coin or postage stamps, to Geo. H. Heafford, general passenger agent, 410 Old Colony Building, Chicago, Ill.

Last of the Season—\$10 Excursion to Niagara Falls via Pennsylvania Railroad.

The last 10-day excursion of the present season to Niagara Falls via the Pennsylvania Railroad will leave Philadelphia, Baltimore and Washington on October 12. An experienced tourist agent and chaperon will accompany the excursion.

Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Philadelphia, Baltimore, Washington and all points on the Delaware Division; \$9.70 from Lancaster; \$8.60 from Altoona and Harrisburg; \$8.25 from Wilkesbarre; \$5.80 from Williamsport, and at proportionate rates from other points. A stop-over will be allowed at Buffalo, Rochester and Watkins, returning.

A special train of Pullman parlor cars and day coaches will be run with this excursion, stopping at Buffalo.

For further information apply to nearest ticket agent, or address Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

Managers of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the Manufacturers' Record. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for the following page.

PROSPERITY AND THE SOUTH.

What Has Been Done May Be Done Again.

In a special circular issued by Messrs. John L. Williams & Sons, of Richmond, Va., they say:

"The South is comparatively a new country, and has limitless room for expansion and growth. Great profits were made in this section at the time of the awakening in 1879-80. Some enterprises were unfortunately managed, some were rushed forward too fast, but fortunes were made by the shrewd and cautious investors.

"We will enumerate a few instances of the rapid and phenomenal appreciation which took place in railroad securities in the Southern States following the revival which began in 1879-80. Among the notable advances may be mentioned Atlanta & Charlotte stock, which, after selling at \$3 per share, became a 6 per cent. dividend payer, and advanced in two or three years to \$100 per share, and is still quoted around par. The stock of the Petersburg & Weldon Railway was considered almost worthless. Five thousand shares were purchased in 1880 at fifty cents per share. In about two years it advanced to \$45 per share, and is now quoted about 110, an appreciation of more than half a million dollars—a fortune for a man of moderate ambition to retire on—from an investment of \$2500. Richmond & Danville Railroad stock was bought largely at about \$2 per share by parties who in the next few years had opportunity of selling at \$250 per share. Chesapeake & Ohio common stock, after being scarcely salable at \$1.50 per share, found eager purchasers a little later at \$33 per share. The capital stock of the Richmond & Alleghany Railroad was given away as a bonus to bondholders, and in about eighteen months advanced to \$80 per share. The preferred stock of the Columbia & Greenville Railroad, which the reorganizers of the property got for practically nothing, rapidly advanced to \$100 per share, and the stock of the predecessor of the Norfolk & Western Railroad, the old A. M. & O. R. R., after selling at about \$1 per share, was exchanged for the new common stock of the Norfolk & Western, which advanced to about \$30. The stock of the Wilmington & Weldon Railroad, the parent company of the Atlantic Coast Line system, was quoted about \$50 per share, rose to par on the payment of regular dividends, declared a scrip dividend of 100 per cent. in 7 per cent. certificates worth 120, continued regular dividends, and a few years later declared another scrip dividend of 200 per cent. in a security worth 85. The extra dividends declared in ten years, in addition to semi-annual dividends, amounted in value to about \$300 per share. The stock, after this enormous distribution of earnings and assets, is now quoted at 115 bid. The advance in bonds during this period was almost as remarkable as the advance which took place in stocks. Atlanta & Charlotte first mortgage 7s from 35 rose steadily to 100, and are now quoted 120. Charlotte, Columbia & Augusta second mortgage 7s ad-

vanced from 40 to 120, and Petersburg & Weldon second mortgage bonds climbed rapidly from 16 to 130, and so on. Many more instances of the same kind could be given. These will suffice. They show the remarkable results which spring from wise and judicious investment in railroad securities in the South. History repeats itself. There are today opportunities for investment as great and as full of promise as these."

Recommends Chesapeake & Ohio.

A banker representing large German interests in our securities says that Berlin, Frankfurt and Vienna dealers have recently been recommending the purchase of Chesapeake & Ohio as one of the cheapest meritorious American stocks, having been particularly impressed by the considerable safe economies that have been introduced in the last year by the management. Foreign dealers in American stocks have been very favorably influenced by the comparison of average trainloads of the Chesapeake & Ohio with those of the Lake Shore, New York Central and Great Northern. The Chesapeake & Ohio average trainload for the year ended June 30, 1897, as recently published, was 352 tons; that of the Lake Shore, 322 tons; New York Central, 288 tons, and Great Northern, 256 tons. The settlement of the soft-coal strike will largely increase the company's business, and its facilities are already being taxed to the utmost by the heavy grain movement for export by way of Newport News.—New York News Bureau.

New Corporations.

A bank has been organized at Culloden, Ga., with G. Z. Blalock, president, and W. C. Jones, vice-president.

The Bank of Campbell, Mo., has been organized, with \$15,000 capital, by B. R. Hopkins, A. D. Bridges and others.

Lamar Watson and others have organized the Homestead Building and Loan Association at Greenville, Miss., with \$10,000 capital.

The Fairfield Loan & Trust Co. has been organized at Winnsboro, S. C., with \$35,000 capital, by George R. Lauderdale and others.

The Annex Building Association has been organized in Baltimore by Edward E. Hughes, Frank N. Benson and others. The capital stock is \$200,000.

Wm. Powell, George D. Allen and others, of Culloden, Ga., have organized a bank under the title of the Bank of Culloden, with \$25,000 capital.

The Newberne Investment Co. has been chartered by Thomas C. Daniels, J. W. Stewart and others, with \$100,000 capital. The main office will be at Newberne, N. C.

The Catonsville National Bank has elected Charles W. MacGill, president; John F. Sippel and Victor G. Bloede, vice-presidents. The bank expects to begin business in a few days.

The Citizens' Building and Loan Association has been organized at Columbia, S. C., with J. S. Muller, president; J. L. Mimnaugh, vice-president, and Robert Moorman, secretary and treasurer.

The Merchants' Exchange of St. Louis, it is reported, has decided to organize a bank for the purpose of lending money in small sums at reasonable rates. George H. Morgan is one of the promoters. The bank is to have \$50,000 capital.

The question of organizing what is known as a chattel bank is being agitated in Kansas City. The idea is to have such an institution to loan money at low rates, and to have a capital of \$50,000. The Provident Association is among those interested.

New Securities.

A. F. Verdery will receive bids until October 15 for \$50,000 worth of 5 per cent. bonds to be issued by the village of Summerville, Ga.

The city bond commissioners have taken an issue of \$50,000 made by the city of Macon, Ga. The issue is at 4½ per cent. interest.

It is reported that the city of Spartanburg, S. C., has decided to issue the proposed amount of \$50,000 in sewer bonds. Address the mayor.

Jarret Harris, county treasurer at Danville, Mo., will receive bids until October 19 for the proposed issue of \$75,000 worth of 6 per cent. bonds.

The people of Worth county, Missouri, have voted in favor of issuing \$25,000 worth in bonds for improvements. Address the town clerk at Grant City.

The proposed issue of bonds to the amount of \$18,000 to be made by the city of Milan, Mo., will be decided upon at an election to be held October 5. The mayor may be addressed.

The board of revenue of Montgomery county, Alabama, will receive bids for the proposed issue of \$50,000 in bonds to be made by this county. They are to bear 5 per cent. interest. C. A. Allen, clerk at Montgomery, may be addressed until October 4.

The bond issue proposed by the city of Montgomery, Ala., will aggregate \$600,000 in all. Of this amount it is proposed to issue \$330,000 to purchase the plant of the City Water Co. The bonds bear interest at the rate of 5 per cent. The mayor will give further information.

The Savannah, Thunderbolt & Isle of Hope Railroad Co., of Savannah, Ga., has given a mortgage to the Central Trust Co. of New York to secure an issue of \$1,250,000 in 4 per cent. bonds. This will comprise the entire bonded debt of the railroad in question, as it retires all former issues.

Dividends and Interest.

The Huntsville Cotton Mill Co., of Huntsville, Ala., has declared an annual dividend of 8 per cent.

The Georgia Home Insurance Co., of Columbus, Ga., has declared a quarterly dividend of \$3 per share.

The Norfolk & Southern Railroad Co. will pay its October dividend of 1 per cent. on and after October 11.

The Algiers Water Works & Electric Light Co., of New Orleans, La., has declared a dividend of 1 per cent.

The bank of Brewton, Ala., has re-elected its present officers and declared a dividend for the year of 12 per cent.

Interest on stock of the city of Baltimore due October 1 will be paid by the Farmers and Planters' Bank to the amount of \$36,500.

The Wilmington & Weldon Railroad Co. has declared interest of 3½ per cent. semi-annual on the certificates of indebtedness issued by this company.

October interest due on the 5 per cent. bonds of the Kansas City, Pittsburg & Gulf Railroad will be paid at the offices of the company at New York and Philadelphia.

The receivers of the Baltimore & Ohio Railroad Co. announce that they will pay interest on the issue of terminal mortgage bonds, which amount to \$8,500,000; also semi-annual interest on the Chicago division bonds, the Columbus, Cincinnati & Midland bonds, the Parkersburg branch Gs, the B. & O. equipment bonds and the 4 per cent. loan of 1893.

Financial Notes.

The United States Trust Co. has been made a reserve agent at Baltimore of the Commercial and Savings Bank, of Suow

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Hill, Md., recently incorporated with \$25,000 capital.

The Kentucky Bankers' Association will hold its annual meeting this year at Frankfort on October 6 and 7.

The Onslow Land & Investment Co., of Wilmington, N. C., has elected E. Porter, president; John F. Divine, vice-president, and George H. Powell, secretary and treasurer.

The Virginia Navigation Co. of Richmond has elected A. H. Drewry, president; J. W. McCarrick, George H. Ingalls, J. B. Barney, vice-presidents, and E. Weissiger, general manager.

Charleston's Direct Trade.

The first cargo of Western grain will be shipped from Charleston, S. C., about the middle of this month, and, according to the News and Courier, it is the expectation of the Charleston Transport Line and its railroad connections with the West to send from five to seven ships a month from Charleston to European ports. In the meantime arrangements have been made for another ocean line. Mr. C. H. Betts, who is in charge of the interests of the Johnson Line at Port Royal and Brunswick, has recently opened an office in Charleston. The

J. WM. MIDDENDORF.

Members Baltimore Stock Exchange.

WM. B. OLIVER.

MIDDENDORF, OLIVER & CO.
BANKERS AND BROKERS,

No. 213 E. German Street, [KEYSER BUILDING.] Baltimore, Md.
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

SPERRY, JONES & CO.

DEALERS IN Southern Investment Securities,
239 East German Street, Baltimore, Md.

OUR FACILITIES ARE UNEXCELLED.

Johnsons have begun to charter many ships at Charleston to Thomas Young & Co., and one of them, the Idar, is to carry about 13,000 bales of cotton from Charleston. Mr. Betts says that he believes that more cotton would be shipped through Charleston this year than had come this way for a very long time. With two lines of steamers working out of the port, the Charleston Transport Line and the one represented by Messrs. Young & Co., he believes the best possible results would be obtained. He feels confident that there is room for both of them; a wholesale competition would be made, of which the port and the people of Charleston would gain the benefits.

It is announced that the bondholders of the Big Stone Gap Improvement Co. have appointed a committee to reorganize this company with the view of developing the coal and iron property which it controls. The committee comprises J. C. Haskell, of Columbia, S. C.; John E. Green and St. John Boyle, of Louisville, Ky.

\$20,000 Worth of Bonds

FOR SALE

By the Borough of Southern Pines, N. C. Bids received until 7 P. M., October 11th, 1897.

Address S. S. THOMAS,
Southern Pines, N. C.

JOHN L. WILLIAMS & SONS,
BANKERS,

Dealers in RICHMOND, VA.

Southern Investment Securities,

MUNICIPAL BONDS A SPECIALTY.
Correspondence Invited.

TO CONTRACTORS.

If you have any municipal bonds or warrants, taken in payment for building waterworks, court or school houses, jails, etc., write us. Conditions being favorable, we can use them.

F. M. STAFFORD & CO.

Dealers in Southern Municipal Securities,
Chattanooga, Tenn.

FOR THE

Renting and Purchasing

OF

Warehouses,
Manufacturing Sites,
Wharf,

and other Business Property,
Apply to

SAFE DEPOSIT & TRUST CO.

OF BALTIMORE.

13 SOUTH STREET.

Mercantile Trust & Deposit Co.
OF BALTIMORE.

Paid-up Capital, \$1,000,000.
Surplus, \$1,000,000.

DEPOSITS RECEIVED
On which interest is allowed, governed by current rates obtainable.

TRUSTEES AND ADMINISTRATORS.
This company is a Legal Depository for funds in the hands of Trustees or Administrators, and allows interest on same pending distribution. Authorized to act as Executor, Administrator, Guardian, Receiver or Trustee.

ACTS AS TRUSTEE OF MORTGAGES OF CORPORATIONS and accepts Transfer Agency and Registry of Stocks.

Safe Deposit Boxes for Rent.
Vaults supplied for Storage of Silver Chests, etc.

JOHN GILL, of R., President.

MARYLAND TRUST CO.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

A LEGAL DEPOSITORY FOR COURT AND TRUST FUNDS.

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

J. WILLCOX BROWN, PRESIDENT.
LLOYD L. JACKSON, FIRST VICE-PRES.
HENRY J. BOWDOIN, SECOND VICE-PRES.
J. BERNARD SCOTT, Secretary and Treasurer.

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W. B. Brooks, Jr., Clayton C. Hall,
W. H. Baldwin, J. D. Baker,
Fredk. W. Wood, F. S. Bangs,
F. M. Thieriot, John B. Garrett.

THE
BIG UNION
MINING Co.

Owens and is now opening up rich gold mines in the famous Leadville Gold Belt of Colorado. Its mines lie on the same contact vein with the most noted of the great Leadville mines. One of these, the "Little Johnny," is the greatest gold mine in Colorado and perhaps in the world. Its present output is about \$300,000 per month, and it is now paying monthly dividends of \$100,000 to \$200,000. The officers and stockholders of the company are not speculators but are well-known conservative business men. Here are some of them:

OFFICERS:

R. E. LYON, President.
STEPHEN H. EMMENS, Vice-President.
H. B. TILDEN, Treasurer.

DIRECTORS:

B. L. Duke, the great tobacco manufacturer of Durham, N. C.
W. T. O'Brien, of the American Tobacco Co., Durham, N. C.
Stephen H. Emmens, Pres. of the Mining and Industrial Exchange, New York City.
R. E. Lyon, of Baltimore, Md.
L. D. Heartt, Cashier First National Bank, Durham, N. C.
H. B. Tilden, of Baltimore, Md.

The stock of this company has been listed on the New York Mining and Industrial Exchange. The office of the company is at 849 Equitable Building, Baltimore, Md.

The treasury stock now being offered affords an investment opportunity that is well worth looking into.

The company does not care to sell in small lots, but will be glad to confer with investors with reference to the purchase of large blocks. The officers feel confident that the facts to be presented concerning the company's property will appeal to the best informed and most conservative and cautious investor.

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Andrews, H. F.	27	Bertsch & Co.	34
Andrews, Perry.	6	Besly, Chas. H., & Co.	48
Angle Lamp Co.	48	Bethlehem Iron Co.	*
Apollo Iron & Steel Co.	24	Big Four Route.	1
Armitage-Herschell Co.	40	Big Union Mining Co.	155
Armitage Mfg. Co.	35	Biltmore Estate.	28
Asheville Woodworking Co.	26	Bird, Wm. M., & Co.	6
Ashtabula Tool Co.	8	Birmingham Boiler Works.	20
Asphalt Ready Roofing Co.	48	Black Mfg. Co.	47
Atkins, E. C., & Co.	29	Bliss Co., E. W.	34
Atlanta Terra Cotta Co.	42	Block-Pollak Iron Co.	28
Austin Separator Co.	22	Boomer & Boschert Press Co.	25
Austin White Lime Co.	6	Roston Belting Co.	10
Automatic Circuit Breaker Co.	24	Bowdon, R. E.	6
C		Bowers, A. L.	26
Babcock & Wilcox Co.	*	Bowes, F. K.	27
Babcock, H. H., Co.	9	Box 335.	26
Baeder, Adamson & Co.	32	Boyd, Jones & Co.	10
Bailey-Lebby Co.	45	Bradford Detective Agency.	8
Bailey, John T., & Co.	24	Bradford Mill Co.	12
Bally Mfg. Co.	47	Bradford Pulverizer Co.	45
Baird, U., Machinery Co.	40	Bradstreet Company.	25
Baldwin Locomotive Works.	13	Branson Machine Co.	36
Ball Engine Co.	14	Brooks, T. H., & Co.	35
Baltimore, Chesapeake & Richmond		Broomell, Schmidt & Co.	19
Steamboat Co.	41	Brotherhood, F.	27
Baltimore Engraving Co.	1	Brown, A. & F.	23
Baltimore & Ohio R. R.	1	Brown Cotton Gin Co.	38
Baltimore Storage & Light. Co.	41	Brown Hoisting & Con. Mch. Co.	9
Barber Asphalt Paving Co.	25	Brown, Lucius P.	6
Barnes Mfg. Co.	42	Buckeye Engine Co.	14
Barnes, W. F. & John, Co.	8	Buckeye Iron and Brass Works.	37
Barnett, G. & H., Co.	48	Buffalo Forge Co.	48
Bates's, James, Sons.	33	Bureau of Freight and Transportation,	
Bay Line.	41	Charleston, S. C.	24
Beach, H. L.	*	Burgess, Chas. S.	26
Beckley, A. J., & Co.	45	Burt Labelling Machine Co.	33
Bellevue Worsted Mills.	27	Bushnell, G. H., Press Co.	38
Benjamin, O. P., Mfg. Co.	*	Byers, Jno. F., Machine Co.	9
Berryman, James.	17	D	
Bertsch & Co.	34	Dallett & Co.	28
Besly, Chas. H., & Co.	48	Damascus Bronze Co.	13
Bethlehem Iron Co.	*	Davis Coal & Coke Co.	8
Big Four Route.	1	Davis-Farrar Co.	42
Big Union Mining Co.	155	Davis Foundry and Mch. Works.	43
Biltmore Estate.	28	Davis, G. M., & Son.	*
Bird, Wm. M., & Co.	6	Davis, Kelly & Co.	28
Birmingham Boiler Works.	20	Dean Bros. Steam Pump Works.	42
Black Mfg. Co.	47	De Kalb, Courtenay.	25
Bliss Co., E. W.	34	De Loach Mill Mfg. Co.	30
Block-Pollak Iron Co.	28	Dempwolf, C. H., & Co.	44
Boomer & Boschert Press Co.	25	Detroit & Cleveland Stm. Nav. Co.	13
Roston Belting Co.	10	Detroit Mill Supply Co.	13
Bowdon, R. E.	6	Detroit Sprocket Chain Co.	39
Bowers, A. L.	26	Dietz, Schumacher & Boye.	12
Bowes, F. K.	27	Disston, Henry, & Sons.	29
Box 335.	26	Dixon, Jos., Crucible Co.	48
Boyd, Jones & Co.	10	Dopp, H. Wm., & Son.	39
Bradford Detective Agency.	8	Dow Wire Works Co.	35
Bradford Mill Co.	12	Draper Co.	24, 36
Bradford Pulverizer Co.	45	Draper Machine Tool Co.	12
Bradstreet Company.	25	Dudley, T. J. & Son.	28
Branson Machine Co.	36	Dufur & Co.	35
Brooks, T. H., & Co.	35	Dunbar, R., & Son.	45
Broomell, Schmidt & Co.	19	Dunning, W. D.	25
Brotherhood, F.	27	E	
Brown, A. & F.	23	Easton Burnham Machine Co.	37
Brown Cotton Gin Co.	38	Eccles, S., Jr.	28
Brown Hoisting & Con. Mch. Co.	9	Eco Magneto Clock Co.	*
Brown, Lucius P.	6	Empire Paint & Roofing Co.	*
Buckeye Engine Co.	14	Epping-Carpenter Co.	13
Buckeye Iron and Brass Works.	37	Etting, Edward J.	27
Buffalo Forge Co.	48	Eureka Fire Hose Co.	10
Bureau of Freight and Transportation,		Everson, B. M.	27
Charleston, S. C.	24	Exchange Banking & Trust Co.	26
Burgess, Chas. S.	26	F	
Burt Labelling Machine Co.	33	Falis Rivet & Machine Co.	23
Bushnell, G. H., Press Co.	38	Farquhar, A. B., Co., Limited.	29
Byers, Jno. F., Machine Co.	9	Farr, F. M.	25
D		Fay, J. A., & Egan Co.	31
Dallett & Co.	28	Fay Manila Roofing Co.	35
Damascus Bronze Co.	13	Fernandina Oil & Creosote Works.	28
Davis Coal & Coke Co.	8	Fidelity & Deposit Co. of Md.	25
Davis-Farrar Co.	42	Fifield Tool Co.	12
Davis Foundry and Mch. Works.	43	Fitz-Hugh & Co.	28
Davis, G. M., & Son.	*	Fogg, A.	28
Davis, Kelly & Co.	28	Foos Gas Engine Co.	16
Dean Bros. Steam Pump Works.	42	Foos Mfg. Co.	*
De Kalb, Courtenay.	25	Forbes, W. D., & Co.	15
De Loach Mill Mfg. Co.	30	Forsyth, S. C., Machine Co.	14
Dempwolf, C. H., & Co.	44	Fort Wayne Electric Corporation.	47
Detroit & Cleveland Stm. Nav. Co.	13	Fossick Co., T. L.	6
Detroit Mill Supply Co.	13	G	
Detroit Sprocket Chain Co.	39	Freese, E. M., & Co.	44
Dietz, Schumacher & Boye.	12	French, Saml. H., & Co.	*
Disston, Henry, & Sons.	29	Frick Co.	14
Dixon, Jos., Crucible Co.	48	Froehling, Dr. Henry.	6
Dopp, H. Wm., & Son.	39	Fuel Economizer Co.	20
Dow Wire Works Co.	35	Fulton Steam Boiler Wks. & Fdry.	14
Draper Co.	24, 36	Furbush, M. A., & Son, Mch. Co.	36
Draper Machine Tool Co.	12	H	
Dudley, T. J. & Son.	28	Gallert, S.	27
Dufur & Co.	35	Gandy Belting Co.	11
Dunbar, R., & Son.	45	Garrett, C. S., & Son.	35
Dunning, W. D.	25	Gas Engine & Power Co.	32
E		General Electric Co.	37, 46
Easton Burnham Machine Co.	37	General Fire Extinguisher Co.	8
Eccles, S., Jr.	28	Gilbert, C. M., & Co.	6
Eco Magneto Clock Co.	*	Glaskin, George F., & Co.	6
Empire Paint & Roofing Co.	*	Glen Cove Machine Co., Ltd.	29
Epping-Carpenter Co.	13	Globe Machine Works.	9
Etting, Edward J.	27	Golden's Foundry & Machine Co.	23
Eureka Fire Hose Co.	10	Goodnow, C. C.	25
Everson, B. M.	27	Goubert Mfg. Co.	19
Exchange Banking & Trust Co.	26	Graphite Lubricating Co.	13
F		Grasty, Robt. Ware.	27
Falis Rivet & Machine Co.	23	Gregory Co., C. E.	27
Farquhar, A. B., Co., Limited.	29	Grosse, L., Art Glass Works.	25
Farr, F. M.	25	Gulbert, John C. N.	*
Fay, J. A., & Egan Co.	31	I	
Fay Manila Roofing Co.	35	Illinois Central Railroad.	1
Fernandina Oil & Creosote Works.	28	India Alkali Works.	38
Fidelity & Deposit Co. of Md.	25	Ingersoll-Sergeant Drill Co.	24
Fifield Tool Co.	12	International Corres. Schools.	6
Fitz-Hugh & Co.	28	J	
Fogg, A.	28	Jackson Mfg. Co.	26
Foos Gas Engine Co.	16	Jeffrey Mfg. Co.	39
Foos Mfg. Co.	*	Jenkins Bros.	48
Forbes, W. D., & Co.	15	Jewell Belting Co.	11
Forsyth, S. C., Machine Co.	14	Johns, H. W., Mfg. Co.	25
Fort Wayne Electric Corporation.	47	K	
Fossick Co., T. L.	6	Kansas City, Pittsburg & Gulf R. R.	41
G		Keeler, E., Co.	17
Freese, E. M., & Co.	44	Kelly, O. S., Co., The.	9
French, Saml. H., & Co.	*	Kelly & Jones Co.	20
Frick Co.	14	Kemper, C. E.	25
Froehling, Dr. Henry.	6	Kendrick Valve & Washer Co.	42
Fuel Economizer Co.	20	Keystone Crusher & Roller Co.	44
Fulton Steam Boiler Wks. & Fdry.	14	Kilbourne & Jacobs Mfg. Co.	2
Furbush, M. A., & Son, Mch. Co.	36	Kilburn, Lincoln & Co.	38
H		Knowles Loom Works.	37
Gallert, S.	27	Knox, Henry E., Jr.	6
Gandy Belting Co.	11	Kokomo Tele'ne & Elec. Mfg. Co.	47
Garrett, C. S., & Son.	35	L	
Gas Engine & Power Co.	32	Lagonda Mfg. Co.	17
General Electric Co.	37, 46	Lambert Gas & Gasoline Eng. Co.	16
General Fire Extinguisher Co.	8	Lambert Hoisting Engine Co.	22
Gilbert, C. M., & Co.	6	Lane Manufacturing Co.	30
Glaskin, George F., & Co.	6	Lang, S. Logan.	27
Glen Cove Machine Co., Ltd.	29	Lefell, James, & Co.	15
Globe Machine Works.	9	Lehigh Valley Brass Works.	15
Golden's Foundry & Machine Co.	23	Leisenring Mfg. Co.	16
Goodnow, C. C.	25	Leonard, Foley & Co.	6
Goubert Mfg. Co.	19	Lewis, H. F., & Co., Ltd.	16
Graphite Lubricating Co.	13	Lidgerwood Manufacturing Co.	9
Grasty, Robt. Ware.	27	Lightning Wage Calculator Co.	24
Gregory Co., C. E.	27	Link-Belt Engineering Co.	39
Grosse, L., Art Glass Works.	25	Loane, J. W.	8
Gulbert, John C. N.	*	Lobdell Car Wheel Co.	32
I		Lombard Iron Wks. & Supply Co.	39
Illinois Central Railroad.	1	Lorain Foundry Co.	13
India Alkali Works.	38	Lowell Machine Shop.	38
Ingersoll-Sergeant Drill Co.	24	Lowell Textile School.	8
International Corres. Schools.	6	Ludlow-Saylor Wire Co.	34
J		Ludlow Valve Mfg. Co.	41
Jackson Mfg. Co.	26	Lunkenheimer Co.	48
Jeffrey Mfg. Co.	39	Lyon, A. I.	28
Jenkins Bros.	48	M	
Jewell Belting Co.	11	Main Belting Co.	11
Johns, H. W., Mfg. Co.	25	Makepeace, C. R., & Co.	6
K		Manistee Iron Works.	42
Kansas City, Pittsburg & Gulf R. R.	41	Manufacturer Sash, Doors & Blinds	26
Keeler, E., Co.	17	N	
Kelly, O. S., Co., The.	9	Marion Steam Shovel Co.	2
Kelly & Jones Co.	20	Martin, Hy., Brick Mch. Mfg. Co.	44
Kemper, C. E.	25	Maryland Mfg. & Construction Co.	20
Kendrick Valve & Washer Co.	42	Maryland Trust Co.	155
Keystone Crusher & Roller Co.	44	Mason Machine Works.	38
Kilbourne & Jacobs Mfg. Co.	2	Mason Regulator Co.	8
Kilburn, Lincoln & Co.	38	McClave, Brooks & Co.	16
Knowles Loom Works.	37	McCully, R.	45
Knox, Henry E., Jr.	6	McDonald, John, & Sons.	6
Kokomo Tele'ne & Elec. Mfg. Co.	47	McDowell, Hamilton.	41
L		McFadden, Charles, Jr.	6
Lagonda Mfg. Co.	17	McGowan, John H., Co.	43
Lambert Gas & Gasoline Eng. Co.	16	McKenna, David.	34
Lambert Hoisting Engine Co.	22	McLanahan & Stone.	45
Lane Manufacturing Co.	30	Mead, V. A., Cycle Co.	25
Lang, S. Logan.	27	Mecklenburg Iron Works.	24
Lefell, James, & Co.	15	Mercantile Trust & Deposit Co.	155
Lehigh Valley Brass Works.	15	Merchants & Miners' Transp. Co.	41
Leisenring Mfg. Co.	16	Meres, C. R., Heater Mfg. Co.	9
Leonard, Foley & Co.	6	Meridian Machine Shops.	37
Lewis, H. F., & Co., Ltd.	16	Meyer, Dr.	